Clinical Autonomy and Nurse/Physician Collaboration in Emergency Nurses

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Declaration

This thesis is entirely my own work and it has not been submitted for a degree at this or any other University.

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Abstract

Aim: To investigate clinical autonomy and Nurse/Physician collaboration among emergency nurses and the relationship between these concepts, personal characteristics and organisational influences.

Background: Nurses have been identified as having a significant role in addressing the challenges of providing modern healthcare. Emergency nurses have reported competence in a wide range of emergency care skills. However, there is evidence that Emergency Department (ED) nurses may have lower levels of clinical autonomy than other areas of practice. Levels of clinical autonomy appear to be influenced by levels of collaboration with physicians and the organisations in which nurses work

Methods: A descriptive correlational study using a survey design with a purposive convenience sample of 141 ED staff nurses (response 70.9%) from 3 EDs in Ireland. Data were collected using the Dempster Practice Behaviours Scale (DPBS) the Nurse/Physician Collaboration Scale (NPCS) and the newly developed Organisational Influences on Nursing Scale. Demographic information was also sought from participants.

Results: Participants were largely female (87%), relatively young (mean age 35.57, SD=7.83) and educated to degree level (48%) or higher (31%) with 40% posessing specialist emergency nursing qualifications. Participants reported moderate levels of clinical autonomy and Nurse/Physician collaboration. No relationships were found between sample characteristics and clinical autonomy and Nurse/Physician collaboration among emergency nurses. Relationships were found between levels of clinical autonomy and Nurse/Physician collaboration ($r=-0.395$, $n=100$, $p<0.001$), and organisational influence on nursing ($r=0.455$, $p<0.001$) and also between Nurse/Physician collaboration and organisational influence on nursing ($r=-0.413$, $p<0.001$).

Discussion: Clinical autonomy of nurses has been linked with quality outcomes in healthcare. The quest for quality in modern healthcare in a challenging environment should acknowledge that strategies need to focus beyond education and skills provision and include essential elements such as Nurse/Physician collaboration and the organisational influence on nursing to ensure the greater involvement of nurses in patient care.

Introduction

According to Kramer and Schmalenberg (2008) "no word engenders more misunderstanding, confusion and differences in conceptualization than does the word autonomy" (pg. 60). However, autonomy is viewed as essential in attaining professional status (Wade, 1999) and has been linked with care quality (Institute of Medicine, 2004; Shang, et al., 2012), nurse satisfaction (Finn, 2001; Zurmehly, 2008) and nurse retention (McCarthy, et al., 2003; Mosely and Paterson, 2008). It has also been acknowledged that autonomy is necessary to enable the profession to respond to the challenges of modern healthcare provision (Hanley, 2003; Reconfiguration Forum for Cork and Kerry, 2009 and Department of Health and Children, 2011). The quality of healthcare also is influenced by the nature of the relationship between nurses and physicians and level of collaboration between the professions (Dechario-Marino, et al., 2001, Baggs, et al., 2004, Lindeke and Sieckert, 2005; and Vaziriani, et al., 2005). However, these two concepts, autonomy and collaboration, appear to reflect opposite ends of the same spectrum, with possible incongruence between these in nursing. Should more autonomy mean less collaboration and vice versa?

Responding to Changing Healthcare

There has been broad acceptance that rapid changes in the healthcare landscape have taken place in recent years. Changes include increased technology, consumer knowledge, costs of healthcare, regulation, nursing education and medical manpower (Domino, 2005). This was reflected in the recognition by the Report of the Commission on Nursing (Government of Ireland, 1998) that health care is changing rapidly and that consequently demands are being placed on the profession

of nursing to respond to these changes. The Commission on Nursing (Government of Ireland, 1998), and indeed other government documents (Department of Health and Children, 2011) envisaged that there would be an increased need for nurses to work autonomously into the future as well as having to work collaboratively within the healthcare team. Through their consultative process the Commission identified a need for greater involvement of nurses and midwives in the decision making process around policy and planning and issues surrounding the management of care (Government of Ireland, 1998). They identified that there appeared to be a pre-occupation with hierarchical and detailed control over nurses and midwives by nursing and midwifery management and that there needed to be devolution of this down to nurses and midwives themselves. Similarly, reports on medical manpower planning (Hanley, 2003), reconfiguration of care (Reconfiguration Forum for Cork and Kerry, 2009) and on the role expansion of nurses (Department of Health and Children, 2011) also make the same assertions.

In response to the European Union (EU) directive on medical staffing, and the requirement to reduce doctors' maximum working hours to no more than 48 hours per week, the Department of Health and Children in Ireland (DOH&C) convened a Task Force in 2002. Among the many strategies to deal with how Ireland should respond to the requirements under the EU legislation, the Task Force recommended enhanced roles for nursing (Hanley, 2003). The task force examined the work that was being carried out by nurses at the time and concluded that through role expansion nurses could make an enhanced contribution to patient care and reduce the reliance on junior doctors in the provision of medical care. There was a recognition by the task force that developments in nursing education as well as nurses' position as care providers on a 24 hours per day 7 days per week basis 'at

the bed side' made members of the profession ideal respondents to providing care for patients in an environment challenged by the reduced availability of medical staff.

Indeed, the recent national public sector pay talks between public service unions and the government raised the issue of the expansion of the role of nurses in the delivery of healthcare. Under the section of the 'Haddington Road Agreement' titled *'the medical nursing interface'* cost savings in non-consultant hospital doctors' hours are expected by the reallocation of work tasks from medical staff to nursing staff (Labour Relations Commission, 2013). Four specific healthcare tasks currently being performed by medical staff are to be transfered to nursing staff (i.e. first dose intravenous medication, intravenous cannulation, phlebotomy and delegated discharge of patients). Again, in this agreement the potential for nurses to expand practice is viewed as an essential component in meeting the challenges of modern healthcare provision. However, collaboration with the medical profession in this activity is viewed as essential (Irish Nurses and Midwives Organisation, 2013).

A Review of Emergency Departments and Prehospital Care in Cork and Kerry (Reconfiguration Forum for Cork and Kerry, 2009) identified that nurses had a role to play in the delivery of care in a reconfigured emergency care system. In this report the review group believed that, through the development of additional skills, nurses could take on additional tasks in the delivery of care in emergency departments. These tasks would include procedures such as phlebotomy, electrocardiographs, intravenous cannulation and casting. It was thought that if nurses became involved in areas of care such as these then there would be an enhancement in the emergency care delivery system as well as a reduction in the

demands on doctors working in emergency departments. In terms of contributing to the overall development of recommendations for nursing practice proposed in this report, it is not clear if emergency nurses were involved. Indeed it could be that emergency nurses could take on many other functions and role if policy, organisational and practice setting issues facilitated change and if nurses worked in a truly collaborative manner in a facilitating organisation.

Emergency Nurses' Skills and Competence

In a quantitative descriptive study to investigate the procedures performed by emergency nurses in Ireland along with their competence in performing those procedures McCarthy, et al. (2013) accessed a convenient non-randomised sample of nurses working in emergency departments across 11 hospitals in Ireland. A survey design was used and data were collected using an instrument adapted from the Activities and Procedures Instrument used by Campo, et al. (2008). The instrument comprised of 119 items reflecting procedures performed by nurses in emergency departments. Reliability of the instrument was evaluated using Cronbach's alpha with the instrument displaying good reliability for both aspects of the instrument, 'competency' (0.98) and 'frequency of practice'(0.94). Data were analysed using the Statistical Package for Social Sciences (SPSS) generating descriptive statistics. Correlations between the competence and frequency of practice were also calculated along with differences between different groups within the sample. A total of 413 questionnaires were distributed to nurses working in the 11 units under investigation with a response rate of 53%. McCarthy, et al. (2013) found that not only were emergency nurses performing what are recognised as basic emergency nursing care tasks but were already engaged in more advanced tasks. An example of this is the issue of intravenous cannulation. Seventy percent

of the sample in this study were already performing this task which is reflective of other more advanced emergency care tasks performed by nurses in the sample. This study also highlights that emergency care nurses perceive that they have quite a high level of competence in performing these tasks. This perceived level of competence may be reflective of the level of education among the sample with 47% of the sample holding at least a post graduate diploma. What this study did not measure was the level of autonomy in clinical decision making among the sample. While the sample may have indicated competence in performing advanced tasks in terms of emergency nursing care there were no data collected regarding the ability of the nurse to engage in these tasks based on their own decision to do so. McCarthy, et al. (2013) question the boundaries between what is deemed appropriate for advanced nurse practitioners and what is deemed appropriate for basic grade nurses. This question may be answered in the level of autonomy among the grades. One of the defining competencies of advanced practice nurses is their level of autonomy in patient care decision-making (National Council for the Professional Development of Nursing and Midwifery, 2007). This is not afforded to or taken by staff nurses and while they may be indicating competence in more advanced emergency care tasks the impact of this in overall service provision may be hampered by their lack of autonomy in clinical practice or indeed the level of collaboration between nurses and physicians working in emergency care.

Emergency Nurses' Autonomy in Clinical Practice

There is a distinct lack of research examining the levels of emergency nurses' autonomy in clinical practice with only a small number of studies found to have examined these issues in relation to emergency nurses (Browning, et al., 2007; Adriaenssens, et al., 2011). These studies have found that emergency staff nurses

appear to have lower levels of autonomy in practice than do nurse managers, advanced practice nurses (Browning, et al., 2007) and nurses from other areas in acute care (Adriaenssens, et al., 2011). There appears, therefore, to be a uniqueness to the work of the emergency nurse when compared with not only advanced practice nurses and nurse managers but also with the general nursing population.

In the context of investigating the levels of clinical autonomy among emergency nurses it is necessary to create an understanding around how these levels are influenced. The literature suggests that the nature of the relationship between nurses and physicians or 'Nurse/Physician Collaboration' has a significant influence over the clinical autonomy of nurses (Hinno, et al., 2009; Gagnon, et al., 2010; and Maylone, et al., 2010). There is also a suggestion that the organisation in which nurses work has an influence over their level of clinical autonomy (Papathanassoglou, et al., 2005; Plager, and Conger, 2007; Cajulis and Fitzpatrick, 2007). The relationship between Nurse/Physician collaboration and the influence of the organisation on nurses and their levels of clinical autonomy appears not to have been reported in the literature to date.

Conclusion

As a specialty, emergency nurses are often viewed as being able to make a significant contribution to patient care and have displayed that they have developed a significant enhancement in skills and competence (McCarthy, et al., 2013). This is reflective of what Nixon (2008) states is the expansion of nursing roles in response to the challenges of a redesigning of emergency services. However, Nixon (2008) also identifies the need to challenge existing boundaries allowing emergency nurses more control and autonomy over their delivery of patient care.

This may not be the case (Browning et al., 2007) and may indeed be hampering the impact of education and skills acquisition among emergency nurses on improving and redesigning service delivery. Notwithstanding the fact that An Bord Altanais (1999), during a consultative process to review the scope of practice of nurses and midwives in Ireland, identified that a lack of autonomy to make decisions as a concern for nurses, autonomy is viewed as linked with role expansion for nurses (DOH&C, 2011).

There is a need, in the context of emergency nursing, to identify current levels of clinical autonomy. Also, factors related to autonomy in clinical practice need to be investigated.

The following chapters will examine literature on autonomy in nursing. A review of the theoretical literature in relation to autonomy and more specifically to autonomy in nursing practice will be presented in the first chapter. This chapter will help create an understanding of the complexity of this concept in a general context while also examining autonomy from a nursing perspective. Chapter 2 will examine the empirical literature on autonomy specifically as it pertains to nursing. Research that has examined autonomy in nursing, the factors related to the autonomy of nurses, as well as the levels of autonomy among nurses will be presented. The third chapter will examine the literature relating to the relationship between nurses and physicians. This chapter has been divided into 2 sections, the first addressing the theoretical literature and the second examining the empirical literature relating to nurse/physician collaboration. This chapter will conclude by identifying a number of gaps in the literature worthy of investigation, while also posing some questions in relation to these gaps.

The fourth chapter will outline the research methodology used. This includes the aims of the research, hypotheses, methodological issues such as sampling, instruments used, data collection and analysis as well as rigor of the instruments. Methodological decisions taken during this study will be explicated with rationale given for the decisions made. Chapter 5 will present the findings and will contain descriptive, comparative and inferential statistics generated from the data. The testing of the hypotheses outlined in chapter 4 will be presented in this chapter The findings will be discussed in chapter 5 in the context of previous research. The final chapter will draw some conclusions from the study as well as identifying the significance of the findings for nursing both in terms of practice and research.

Chapter 1

Theoretical Perspectives on Autonomy

Introduction

Autonomy is viewed as essential in achieving status as a profession (Wade, 1999). As a concept, autonomy is relevant to the discipline of nursing as it continues to not only respond to changes in healthcare provision globally but strives to establish its position as a profession. However the concept is complex (Wilkinson, 1997). While autonomy in nursing has been viewed by some as self determination or 'authority over total patient care' (Skår, 2009), Porter-O'Grady (2001) believes that no profession can continue to practice autonomously. Therefore it is apparent that there is some divergence on what constitutes autonomy and how the concept is understood in relation to nursing. Nurses have indicated a desire to act autonomously but believe that they have been unsuccessful in achieving autonomous practice (An Bord Altranais, 1999). This is supported by Kramer, Maguire and Schmalenberg (2006) who state that levels of autonomy among nurses do not appear to have increased over the years despite calls for expanded and enhanced roles for nurses (Hanley, 2003). It is suggested that even at the advanced practice level nursing has not become more autonomous but rather has taken on new areas of practice without any control over that practice (Turner, Keyzer and Rudge, 2007).

In terms of understanding autonomy and the role that it plays in nursing it is necessary to establish an understanding of the concept and how it is actualised and recognised in nursing. A search of published literature was conducted to identify both research and expert opinion relevant to the current research. Of note was the

confusion and interchangeable use of terms for autonomy in nursing practice. To identify relevant literature search terms were broad to include singularly, and combinations of, 'autonomy', 'nurs*', 'clinical', 'practice', 'professional', 'authority', 'decision making' and 'control'. A number of databases were searched including CINAHL, Web of Knowledge, PubMed and PsychInfo as these databases would offer the greatest opportunity to identify relevant literature. Searches were conducted to include peer reviewed literature published since 2002. Based on the literature reviewed further literature was sought that addressed Nurse/Physician collaboration. Search terms used to source literature on Nurse/Physician collaboration were a combination of 'nurse/physician', 'collaboration', 'interprofessional', 'interdisciplinary'. These searches were conducted on the earlier identified databases to include peer reviewed literature published since 2002. The focus of the literature searches were to identifiy research reports but some theoretical papers were retrieved to illuminate understanding of the concepts being investigated in this study. The reference lists of previously retrieved papers were also reviewed to identify literature published within the search period (since 2002) and to identify older but important literature. Inclusion of literature was based on a judgement that the literature addressed autonomy and nurse/physician collaboration in the broader sense despite what terms were used.

This review of the literature in relation to autonomy and specifically autonomy in nursing aims to establish an understanding of the concept autonomy in nursing and more specifically in relation to the practice of nursing in the clinical setting.

1.1 Defining Autonomy

Autonomy as a concept has many differing meanings. The term is derived from the Greek words *autos*, meaning self and *nomos*, meaning rule or government (Wade, 1999). A dictionary definition such as the one offered by the Penguin English Dictionary (2002) indicates that autonomy is "self-determined freedom and independence". According to Maas, et al (1975) autonomy is defined "...as the right or the authority to determine and regulate one's own acts without outside interference" (pg. 2201). These definitions reflect much of the debate around autonomy, centring on respect for people and being free to make decisions without outside interference (Lawerence, 2007). This belief is shared by some of the great thinkers such as Neitzsche and Freud (Neuhouser, 2011) who believe that autonomy is 'self-mastery'. Keenan (1999), however, argues that this type of definition is too simplistic.

A definition of autonomy that espouses a right to self determination implies a number of determinants. It is presumed that the autonomous individual can act on their own decisions without interference from outside influences. It also assumes that the individual has the authority within society to act in a manner that achieves their own end. To create an understanding of this concept it is worthy to examine some of the theoretical perspectives on autonomy.

1.2 Theoretical Perspectives on Autonomy

Blöser, et al. (2010) state that etymologically autonomy "means self-legislation, or more generally self-rule or self-governance" (pg. 240). When applied to individual

people Blöser, et al. (2010) believe that it is based on one's capacity to make judgements and decisions. This understanding is congruent with MacDonald's (2002) assertion that a modern understanding of autonomy is based on "...the ability to direct one's own life and to make one's own decisions" (pg. 195). There is therefore a certain expectation of freedom, capacity to decide and authority to act on those decisions. This belief is predicated on the absence of external forces that may impede self determination (Neuhouser, 2011). A fundamental flaw in this approach is the lack of regard or acknowledgement of outside influences (Wilkinson, 1997). MacDonald (2002) believes that the "liberal understanding of autonomous agents as free and independent agents is inadequate" (pg. 195) and that a better understanding of this complex concept will be derived from examining the wider social interrelationships that impact on choices and actions.

Neuhouser (2011) identifies the writings of Rousseau (philosopher in 18th century) as the basis for the modern understanding of autonomy. Rousseau acknowledges the complexity of the concept of autonomy especially in terms of where autonomy sits in wider society. According to Neuhouser, autonomy is not merely about freedom or liberty stating that Rousseau believes autonomy to be something that is achieved when individuals yield some of their individuality to participate in a wider society or community. Participation in a wider society and community involves rules, laws and expectations formed within the community and based on the community's beliefs and expectations (Neuhouser, 2011). In discussing a context based autonomy MacDonald (2002) identifies the individual's obligation to respect the autonomy of others. MacDonald (2002) believes that, certainly in the context of healthcare, patients have the right to exercise some control over their healthcare, within reason. This takes into account the wider society or community

in terms of laws and resources available. These are just some of the outside influences that impact on the autonomy of individuals. Neuhouser (2011) states that autonomy can exist within the context of being bound by, and acting within, society or community defined boundaries. The freedom and capacity in this sense is to act within influence/ hindrance/ restriction of the community of which the individual is part.

Neuhouser (2011) views autonomy in this context as the answer to the question of how dependent persons can be free or self determining. He believes that a self-sufficient totally independent person is not recognisable as a human being as we are all interdependent members of a society or community that influence each other within the creation of social norms and boundaries. As a profession, nursing also holds a position not only within a wider society but also within a society of the professions that deliver healthcare and therefore any understanding of autonomy in nursing practice should be viewed in this context.

MacDonald identifies two main determinants of autonomy; *control over own actions* and the *capacity to think rationally*. According to Blöser, et al. (2010) these are '*autonomy as an achievement'* and '*autonomy as a capacity'*. Central to all notions of autonomy is the capacity for *critical reflection* (Blöser, et al., 2010). In the educational literature on autonomy critical reflection is espoused as an important and key educational goal (Nickel, 2007). Critical thinking is based on situational experience and facilitates judgement and decision-making. Blöser, et al. (2010) offer a philosophical theory of 'Experience-Responsive Critical Reflection' (ERCR) to describe the complex mental activity of how reflection on past experiences and knowledge shapes the judgement on a new experience. They

describe four elements of ERCR where; new experiences are recognised, a new experience is considered in the context of pertinent existing values, the adequacy of existing values are reconsidered in the context of the new experience and values are altered or confirmed based on the reflection. The capacity to engage in ERCR or any of the individual elements of ERCR limits the capacity for autonomy of an individual according to Blöser, et al. (2009). They acknowledge that reflection is dynamic in that it takes time and that the knowledge on which judgements are made change over time as new knowledge and experiences are gleaned. Further to the philosophical debate on autonomy is the application of judgement based on reflection or *achievement* autonomy (Blöser, et al., 2009). Here there is a belief that the freedom of autonomy is characterised by both a negative and positive freedom (Nickel, 2007). According to Nickel (2007) the philosophical literature identifies both a freedom from constraints (negative freedom) as well as a freedom to do or act (positive freedom) as features of autonomy. Nickel (2007) asserts that in terms of the understanding of autonomy there needs to be not only a focus on absence of restriction but also on the realisation or application of that freedom i.e. the achievement of autonomy.

In terms of the conceptualisation of autonomy in the educational literature Nickel (2007) identifies five conceptions by a number of educational theorists specifically *belief autonomy*, *action autonomy*, *interest autonomy*, *purpose autonomy* and *social autonomy*. *Belief autonomy,* and the linked *action autonomy,* based on the work of Dearden (1975), essentially proposes that students think and act based on their own mind. Students' thoughts and beliefs are developed, as is their capacity for autonomy, by teachers encouraging students to reflect on their own ideas and the quality of those thoughts and ideas. This activity is nurtured, according to

Nickel (2007), through encouraging personal writing, drama and discussion among students. *Interest autonomy* is based on the work of Callan (1988) and predicated on the belief that students need to be exposed to as many options and situations as possible to help develop their interests and broaden their knowledge. This in turn develops children's capacity to choose and make decisions (Nickel, 2007), an essential feature of the capacity for autonomy (Blöser, et al., 2009). In terms of what Nickel (2007) identifies as *purpose autonomy* (based on the work of Dewey) Nickel believes that this conceptualisation of autonomy goes beyond acting on immediate desires but develops the capacity for foresight and promotes future learning. *Purpose autonomy*, according to Nickel, arouses curiosity and espouses a willingness to engage in and persist with challenging and often difficult tasks as part of fulfilling an end. Finally, *social autonomy,* based on the work of Kerr, considers the impact of actions on others. It develops the capacity to consider the consequences of following ones own interests upon others (Nickel, 2007). Educational conceptualisations of autonomy appear to reflect the complex nature of autonomy. In terms of educationally addressing the issue of autonomy there appears to be understandings of the concept that may not essentially be different but view the same concept from differing standpoints and therefore when taken in their entirety articulate a multidimensional construct that can be viewed as a congruent whole rather than divergent understandings.

In terms of healthcare, autonomy is discussed within the bioethical literature. Beauchamp and Childress (2001) in their understanding of autonomy reflect the beliefs prevalent in this literature. They believe autonomy is exercised by competent individuals, who base their decisions and actions on the possession of adequate knowledge and without the interference or control from others

(Beauchamp and Childress, 2001). This belief is viewed as being based on the Kantian principle of respect for persons (Cuypers, 2004). The focus of the bioethical literature therefore is on the exercise of free will among consumers of healthcare and the basis of that freedom in terms of restrictions and knowledge or belief system. Barilan (2011) takes issue with this conceptualisation of autonomy in healthcare and believes that autonomy is not merely about competent persons making choices but needs to reflect the acceptability of choices and actions within the greater society. Knowledge and beliefs may, in the absence of competence or control, lead to decisions and actions that are 'unacceptable to human dignity'. Barilan (2011) distinguishes between personal autonomy and principled autonomy in healthcare. Respect for personal autonomy is described by Barilan (2011) as "...respect for persons disposed to the development and pursuance of coherent, nonpredatory, and rich life plans and their corresponding systems of values" (pg. 499). In contrast, according to Barilan (2011), principled autonomy is based on respect for societal beliefs and norms. In terms of healthcare, there seems to be divergent views of autonomy with respect to the exercise of, and respect for the autonomy of individuals and how this sits within the context of society as a whole. This uncomfortable relationship is encapsulated by Barilan (2011) in distinguishing autonomy as "...a property of the subject" (pg. 502) where as respect for autonomy is "...an attitude of one subject towards another" (pg. 502). Barilan (2011) reconciles the divergence between autonomy and respect for autonomy by acknowledging that complete transparency between different parties in a healthcare relationship is impossible and therefore "...respect for autonomy is not about an ideal but about approximations" (pg. 502).

1.3 Autonomy: Definitions and Uses in Nursing

Wade (1999) believes that autonomy in nursing has been 'loosely' defined and has led to ambiguity regarding its meaning with McParland et al. (2000) identifying a lack of consistency in defining the concept in the nursing literature. This is supported by Kramer, Maguire and Schmalenberg (2006) who identify a lack of 'precision' in defining autonomy as a concept. McParland, et al (2000) believes that autonomy is fragile as a concept, lacks consistency and is influenced by the individual circumstances of any individual or situation. Definitions of autonomy in nursing reflect to some degree the debate about autonomy in the wider non-nursing literature (Appendix I). Similar to the simple and somewhat traditional definitions of autonomy that espouse freedom and free-will there are definitions in nursing that reflect this belief. According to Seago (2006) autonomy "can simply be defined as independence or freedom" (pg. 93) where a person can make work decisions without interference or influence from others. This definition is broad and does not account for the wider environment of healthcare provision or even patients themselves.

Lewis (2006), while also offering a simple definition of autonomy in nursing, does place some boundaries and context around the freedom on which the concept is built. According to Lewis autonomy "is the freedom to make discretionary and binding decisions that are consistent within one's own scope of practice and the freedom to act on those decisions" (pg. 1). Here Lewis acknowledges (similar to Neuhouser, 2011) that there are limits to the levels of decision making and freedom to act for nurses. Autonomy that is based on levels of education, understanding and scope of practice creates a practice or profession based autonomy. Within the nursing profession an identified sphere of knowledge, practice and influence

defines the autonomy of the profession. Lewis (2006) states that when nursing is practiced within this sphere then it should not be influenced or restricted unduly from outside of the profession. An Bord Altranais (1999) sums this up in declaring that the autonomy of any profession relates to the freedom of the individuals within that profession to make decisions within the boundaries of that profession.

Notwithstanding the fact that definitions of autonomy within the profession reflect freedom to act within the normal accepted boundaries of the profession there also appears to be some confusion about what constitutes the realm of autonomous nursing practice.

According to Keenan (1999) there appears to be three separate uses of the term in the literature. Firstly there is *'a rights based notion'* of autonomy where autonomy is used in the context of patients and patient care. Secondly there is autonomy of the *'professional group'*. Here Keenan asserts that autonomy refers to defining the characteristics of the professional group and relates to the work of the individual professional. Finally Keenan (1999) identifies *'occupation-related autonomy'* relating to the context of work of the profession. Weston (2006) identifies two dimensions of autonomy in nursing. Like Keenan, Weston identifies an organisational autonomy or 'Control Over Nursing Practice' (CONP) as a distinct entity from autonomy in the delivery of nursing care or in the practice realm itself.

According to Weston (2008) confusion about autonomy in nursing practice is compounded by the use of different terms to describe the same 'phenomenon'. Weston states that *'Control Over Nursing Practice'* (CONP) is a term that best describes "the freedom and authority of nurses to engage in decision making related to the context of nursing practice including organizational structures,

governance, rules, policies, and operations" (pg. 408). The term CONP encapsulates terms that describe nurses' autonomy in relation to decision-making about unit operations. Therefore, CONP relates to the organisation and guidance of a unit or department and is not necessarily concerned with clinical decision-making. On the other hand Weston (2008) identifies 'Clinical Autonomy' as having influence over patient treatments, co-ordination of care and the expansion of practice. According to Weston (2008), clinical autonomy best describes " the freedom and authority of nurses to make nursing care decisions concerning the content of clinical care in an interdependent practice" (pg. 408). Working within certain rules and privileges is believed to be inherent in clinical autonomy, as is the ability to move outside of those boundaries as the need or opportunity arises in an expansion of practice.

To highlight the importance of distinguishing the varying understandings of autonomy it is important to identify the meaning of autonomy for nurses in clinical practice. In their evidence based management study using Donabedian's Structure Process Outcomes paradigm to generate a grounded theory of clinical autonomy, Kramer, et al. (2006) sought to provide an in-depth analysis of the concept. Using 3 sources of data (published literature, operational/ evaluation data from each participant site and consensus from experts) they asked nurses (n=131) managers (n=81) and physicians (n=55) to select a definition that most closely represented their understanding of autonomy in nursing from a list eight definitions offered. Ninety six percent of the sample selected either of the two definitions that defined autonomy in the practice of nursing or 'clinical autonomy' as opposed to 4% who selected one of the definitions that addressed job or organisational autonomy. The

two definitions of clinical autonomy offered to participants by Kramer, et al. (2006) were as follows:

- *"An individual's ability to develop and implement professional practice role of nursing and to carry out responsibilities of the position without close supervision"*

- *"The freedom to use judgement and decision making skills to make clinical decisions regarding patient needs, delegation of patient care activities, and nursing care outcomes"*

(pg. 483)

It appears that in terms of decision-making and autonomy in nursing two distinct contexts emerge. A distillation by Weston (2008) clarifies this and identifies the contexts as *organisational* and *patient care based*. Patient care based autonomy or clinical autonomy emerges as the concept that appears most relevant to nurses in practice (Kramer, et al., 2006). In view of the discussion surrounding autonomy in nursing it is necessary to examine and clarify the concept of clinical autonomy in nursing practice.

1.4 Clinical Autonomy in Nursing

Cash (2001) believes that clinical autonomy is of importance to nurses in clinical practice but that little understanding of clinical autonomy as a concept has developed over the years. Based on their grounded theory study on autonomy in

clinical practice Kramer, Maguire and Schmalenberg (2006) constructed a comprehensive definition of clinical autonomy,

"Autonomy is the freedom to act on what you know in the best interests of the patient... to make independent clinical decisions in the nursing sphere of practice and interdependent decisions in those spheres where nursing overlaps with other disciplines... Autonomy is facilitated through evidence-based practice, being held accountable in a positive constructive manner, nurse manager support and it often exceeds standard practice" (p.480).

They describe the nursing sphere as containing those elements that are of concern to nursing such as caring functions and maintenance of health. The overlap occurs where nursing function overlaps with that of other disciplines e.g. that of medicine (Kramer, Maguire and Schmalenberg, 2006).

Kramer, Maguire and Schmalenberg (2006) differentiate clinical autonomy from control over nursing practice (CONP)/organisational autonomy in terms of the knowledge and skills required to exercise each realm of autonomy. They identify organisational knowledge and skills for job/control over nursing practice (CONP)/organisational autonomy whereas clinical skills and good clinical judgement ability as being required for clinical autonomy. Weston (2008) summarises by stating that clinical autonomy "is a term best used to describe decision making within the milieu of clinical practice" (p. 406). In defining clinical autonomy Weston (2009) indicates that it is "the authority, freedom and discretion to indicate clinical nursing judgements concerning the care of individual patients" (pg. 88). Here Weston discusses freedom in terms of nursing practice and not as an absolute therefore contextualising the freedom and authority of nursing within boundaries of defined nursing practice. Wade (1999) believes that a definition of autonomy in nursing should be inclusive of the self and others where there is a 'joint locus of control' involving the nurse, patient and others. She offers

Dempster's definition of autonomy in nursing as a comprehensive definition.

Dempster (1994) defines autonomy in nursing as "a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviours and sentiments related to readiness, empowerment, actualization and valuation for autonomous practice" (pg. 227). Like Kramer, et al.'s (2006) definition of clinical autonomy, Dempster acknowledges that there is variation in the amount of independence exercised by nurses in practice. Kramer, et al. (2006) espouse interdisciplinary overlap and interdependence in their definition of clinical autonomy. Dempster is more explicit in her assertion about interdisciplinary working by stating that while autonomy in the practice of nurses is a dynamic process with variation in the amounts of independence it is not characterised by subordinate behaviours, implying a respect for nurses and their right to exercise clinical judgement by others in healthcare delivery.

The debate about autonomy within the nursing profession appears to reflect that in society in general. There has been some confusion about autonomy in nursing in the literature (Wade, 1999; McParland et al., 2000; Kramer, Maguire and Schmalenberg, 2006). However, there emerges an understanding of autonomy in nursing that reflects the nursing profession's membership of a wider healthcare community including patients and other healthcare professions. This understanding includes an acknowledgment of boundaries and recognises that autonomy in nursing may be limited to the realm of nursing practice (An Bord Altranais, 1999; Lewis, 2006). Defining the nature of autonomy in nursing practice, however, has also been a challenge as has the realm within healthcare to which nursing autonomy is relevant. It appears that nurses are interested in the concept of autonomy in relation to the provision of patient care or clinical practice. Literature

reviewed support the identification of 'clinical autonomy' as a distinct concept for investigation in nursing. Clinical autonomy in relation to nursing needs to be further analysed to create a clearer understanding of the concept.

1.5 Concept Analysis of Clinical Autonomy in Nursing

The purpose of a concept analysis is to make sense of a concept so that it can be understood and communicated. It is useful for the purposes of this study to generate an understanding of the concept so that it can be effectively investigated. Three published papers were found reporting concept analyses of autonomy in relation to nursing (Wilkinson, 1997, Wade, 1999 and Keenan, 1999). These examine the concept from a number of differing perspectives; a rights based notion, professionally and occupation related (Keenan, 1999), nursing education (Wade, 1999) nursing practice (Wilkinson, 1997). Keenan's work (1999) has a broad focus on the use of autonomy in nursing and offers little utility in terms of understanding clinical autonomy for the purposes of this study. While Wade's analysis focuses on nursing education the principle focus of nursing is in the provision of patient or client care. Wilkinson's (1997) analysis of the concept of autonomy in clinical nursing practice will be the focus of this section. The guiding framework for Wilkinson's concept analysis is the one proposed by Walker and Avant (1988). In terms of analysing the concept of clinical autonomy in nursing, Wilkinson's work will be examined and developed further using Walker and Avant's (2005) method for concept analysis to reflect an updated perspective of clinical autonomy in nursing.

Wilkinson (1997), identifies the varying and complex nature of autonomy. He identifies how the concept has been taken to mean independence and how independence is often viewed as "the core theme of autonomy" (pg. 703). However, Wilkinson does acknowledge that there may be limitations to the level of independence within nursing especially from outside the profession e.g. from the medical profession or employers. Wilkinson agrees that to be completely independent is idealistic. He states that it is also somewhat unrealistic and that, because it may negatively impact on the autonomy of others, it is also undesirable.

Defining Attributes of Clinical Autonomy

In determining the defining attributes of autonomy in nursing practice (clinical autonomy) Wilkinson draws from the fact that autonomous decision-making in nursing is based on nursing's unique professional knowledge base. He identifies 3 attributes of autonomy in nursing practice:

1. *Practices within a professional context which is self regulating*
2. *Makes decisions which are based on professional judgement and is able to act on these within his/her own sphere of practice*
3. *Is cognizant with determining forces and has the knowledge to judge when these should be acquiesced, and when they should be challenged.*

(pg. 704)

These attributes reflect the encompassing understanding of autonomy in the context of membership and participation in a wider social system (Neuhouser, 2011).

Practicing within a professional context that is self-regulating is through a professional regulatory body. In Ireland this is through the Irish Nurses and Midwives Board (An Bord Altranais agus Cnaimhseachais). This statutory body sets, monitors and maintains the standards for, and regulation of, nursing and midwifery practice in Ireland. To practice as a nurse and to exercise autonomy as a nurse the nurse must possess and maintain registration as a nurse. The regulation of the profession as well as giving direction to the sphere of nursing is the responsibility of An Bord Altranais in Ireland and ensures that patient and public safety is upheld though professional registration, regulation and standard setting (An Bord Altranais, 2000).

Being able to make practice decisions within one's own sphere of practice does not assume that collaboration or interaction outside of nursing in spheres of practice that overlap with other professions cannot occur. The belief in a total independence, in complete and absolute free will is not conveyed by Wilkinson. According to Wilkinson (1997) autonomy is complex, asserting that autonomy is evident at many levels. An assertion that assumes autonomy is dependent on one's ability to make choices independently and free from undue influence (McParland, et al., 2000) is idealistic, and while it may be aspirational, the possibility that it may encroach on the rights of others, such as patients and other healthcare professionals, may render it undesirable (Wilkinson, 1997). A definition of professional nurse autonomy is offered by Wade (1999) as " belief in the centrality of the client when making responsible discretionary decisions, both independently and interdependently, that reflect advocacy for the client" (p. 311). Here, Wade introduces the notion of interdependence as inherent in autonomy in nursing. Weston (2006) supports this interdependent working by observing that nurses work

in interdisciplinary teams where all activities are integrated and therefore autonomy must be viewed in this context. Weston gives the example of where a worker may be working independently but be governed by such rigid rules as to have no opportunity to exercise autonomy. These beliefs are reflective of Wilkinson's defining attributes of autonomy in the practice of nursing.

Antecedents to Clinical Autonomy

Wilkinson (1997) identifies a number of antecedents to the enablement of autonomy in nursing practice:

- The nurse must be able to achieve and maintain professional registration
- The nurse must attain and maintain nursing knowledge and skill
- The nurse's practice area should be defined
- The nurse must have knowledge and skills in order to develop tacit knowledge
- The nurse must want autonomy
- The nurse must have responsibility and authority to act autonomously
- The nurse must be able to challenge their own circumstances
- The practice area or context must value nursing practice
- The organisation must be run in partnership throughout the organisation

In terms of identifying antecedents to autonomy in clinical practice there are some that Wilkinson has listed that are antecedents, not only to autonomous nursing practice per se, but to practice as a nurse regardless of the level of autonomy of the

nurse. For example having professional registration is a requirement to practice as a nurse in Ireland and with it comes a professional Code of Conduct that expects the maintenance of skill and competence (An Bord Altranais, 2000). In terms of the relevance of Wilkinson's (1997) identified antecedents these will become clearer through the presentation of the empirical literature in the next chapter.

Consequences of Clinical Autonomy

Wilkinson (1997), in his concept analysis of autonomy in nursing practice, offers few consequences of autonomy in the clinical practice of nurses, namely *communication over professional issues* and *accountability for decisions made*. In terms of communication over professional issues it is difficult to reconcile this with being a consequence of clinical practice. As evidenced in the earlier discussion, clinical autonomy is about autonomy at the practice level rather than control over the practice area or the profession itself. The consequences of clinical autonomy among nurses must be reflective of autonomy at that level and be identifiably separate to consequences of autonomy at levels that are not directly related to the patient care level such as CONP. The identification of consequences of autonomy among nurses creates an appreciation of the importance of the concept for nurses and nursing. A number of consequences of that appear to emanate from the presence of autonomy in nursing practice include:

- Job Satisfaction (Finn, 2001; Hayhurst, et al., 2005; Zurmehly, 2008 and, Iliopoulo and While, 2010)
- Nurse retention (Mosely and Paterson, 2008 and Brunetto, et al., 2011)
- Responsibility for decisions made (Mrayyan, 2004)

Summary

This chapter discusses the theoretical literature on autonomy with a specific focus on autonomy in nursing. The literature reviewed identifies that autonomy is not only desirable for nurses (An Bord Altranais, 1999) but is essential for nurses to achieve professional status (Wade, 1999). However, there appears to be confusion about what constitutes autonomy in nursing.

Exploring varying definitions of autonomy in a wider society opened up an examination of the concept in this chapter. It is clear that at a basic level autonomy is considered self determination without outside influences over decision making (Maas, et al., 1975; Wade, 1999; Lawerence, 2007 and Neuhouser, 2011). Autonomy at this level, however, is considered over simplistic (Keenan, 1999) as it does not consider a wider society.

A number of theoretical perspectives on autonomy were examined in this chapter. While there appears to be a belief that autonomy relates to self-determination (MacDonald, 2002; and Blöser, et al., 2009) it is predicated on the expectation that one has the ability, authority and capacity for self-determination (MacDonald, 2002; and Neuhouser, 2011). Simple understandings of autonomy do not account for an individual's participation in a wider society or community (MacDonald, 2002; and Neuhouser, 2011). This belief has relevance for nursing as a profession because nurses form part of a wider society involving other professions, patients/clients/service users and legislators. Further analysis of autonomy revealed that for individuals to be autonomous they must have some control over their actions and the capacity for rational and critical thinking (MacDonald, 2002; Nickel, 2007; and Blöser, et al., 2009). In examining the theory of 'Experience-

Responsive Critical Reflection' offered by Blöser, et al. (2010) it is clear that the exercise of autonomy involves complex mental activity surrounding reflection and the shaping of decisions. There also appears to be a belief that autonomy is not merely the absence of restriction but also the application of the freedom espoused in autonomy (Nickel, 2007). The complexity of autonomy is reflected in the literature where it is apparent that, while there are differing viewpoints regarding the concept, they, in their entirety, represent a congruent whole rather than divergent views (Dearden, 1975: Callan, 1988; Nickel, 2007; and Blöser, et al., 2009).

In terms of healthcare the literature on autonomy agrees that autonomy is exercised by competent individuals basing their decisions on adequate knowledge (Beauchamp and Childress, 2001; Cuypers, 2004; and Barilan, 2011). This belief is based on respect for the person (Cuypers, 2004). However, there appears to be some disagreement in terms of the level of self-determination allowed to individuals in healthcare with Beauchamp and Childress (2001) believing that the absence of outside interference should exist while Barilan (2011) indicates that choices should be made within the context of a wider society. Barilan (2011) states that autonomy in healthcare is not an absolute ideal but rather about approximations where there is an acknowledgement that there cannot be complete and absolute exercise of free will, nor can there be a complete and absolute transparency between all parties in the healthcare relationship.

The discussion about autonomy in nursing reflects that in society in general. There appears to be the same divergence in views regarding the level of independence involved in the understanding of autonomy in nursing (An Bord Altranais, 1999;

Keenan, 1999; McParland, et al., 2000; Kramer, Schmalenberg and Maguire, 2006; Seago, 2006; Weston, 2006; Lewis, 2006) (Appendix I). It is apparent that definitions of autonomy in nursing espouse a freedom to practice within accepted boundaries for the profession and that autonomy is not an absolute in terms of freedom from restriction to practice. There appears, however, confusion in the literature about autonomy in nursing with differing terms being used to describe autonomy at different levels (Weston, 2008). Of most relevance to the profession, however, is autonomy in clinical practice or 'clinical autonomy' (Cash, 2001; Kramer, et al., 2006; and Weston, 2008).

Based on the review of the theoretical literature the definition for autonomy in nursing practice offered by Demspter (1994), who defines autonomy as *"...a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviours and sentiments related to readiness, empowerment, actualization and valuation for autonomous practice"* (pg. 227) has been adopted for this study. To create clarity around the conceptualisation of 'clinical autonomy' in nursing a review, development and update of a published concept analysis (Wilkinson, 1999) was conducted using the framework proposed by Walker and Avant (2005). The exploration surrounding the understanding of autonomy, not only in a wider societal context, but specifically in relation to nursing leads to an examination of the empirical literature on autonomy in nursing. Chapter 2 aims to identify those issues in relation to autonomy in nursing in the empirical literature, and in particular emergency nursing, which require further investigation.

Chapter 2

Review of Empirical Literature on Autonomy in Nursing

Introduction

It is clear from the theoretical literature that autonomy as a concept is complex with divergent meanings and understandings. However, within nursing practice at least there appears an emerging consensus that the concept does not mean independence in practice. This chapter explores this further through the empirical literature.

2.1 The Meaning of Autonomy in Nursing Practice – Clinical Autonomy

The relevance of clinical autonomy to nurses practicing clinically is identified in a comparative descriptive study by Mrayyan (2004). Through an electronic survey sent to 3615 hospital based nurses in the USA, Canada and United Kingdom (response rate 10%) Mrayyan gathered data on levels of autonomy of nurses working in hospital settings. The primary aim of this study was to examine the role of the nurse manager in enhancing staff nurse autonomy. While staff nurse autonomy formed the focus for this study Mrayyan does not provide a definition for nurse autonomy in her report, this is despite acknowledging that the concept has been poorly defined in the literature. Mrayyan used the instrument developed by Blegen, et al. (1993) to measure staff nurses' levels of autonomy as part of a four part questionnaire including sections developed by the author. It must be assumed that in using this scale for autonomy that Mrayyan adopts the Blegen, et al.(1993)

definition for autonomy which Weston (2009) identifies as "authority and accountability for patient care and unit decisions" (pg. 90). Overall reliability co-efficient for the questionnaire was determined to be 0.88 but Mrayyan does not give detail of the validity of the autonomy measure used in the study. Weston (2009) notes that the reliability of Blegen, et al.'s (1993) instrument had not been previously reported while the content validity of the instrument had been established through a panel of experts. Mrayyan established that nurses had higher autonomy scores for 'patient care decisions' (mean 3.74) than for 'unit operations' (mean 2.56). While this study has limitations in relation to the lack of definition of autonomy, rigor of the instrument used and the response rate to the study it does indicate that autonomy over 'patient care decisions' or autonomy in the practice of nursing (clinical autonomy) may be relevant and important to clinical nurses.

Skår (2009) in a qualitative study using Gadamer's hermeneutics sought to illuminate the meaning of autonomy in nurses' experiences in their work situations. Data collected were stories about practice from both individual interviews and focus groups using open-ended questioning. Interviews (60 minutes duration) and focus groups (120 minutes duration) were audio taped and transcribed and data were analysed using the "four steps proposed by Fleming et al. (2003) based on Gadamer's philosophical hermeneutics" (p. 2229). The sample consisted of a purposive sample of 11 female nurses who graduated with a degree in nursing in 2003/2004 in Norway and were working in diverse practice settings. From Skår's (2009) study four themes emerge with three directly indicating autonomy in the direct provision of nursing care. Firstly, *'to have a holistic view'* relating to how nursing work is organised in terms of providing holistic care. Secondly, *'to know the patient'* emerged highlighting the importance of the time spent with the patient.

The third theme to emerge from Skår's study is *'to know that you know'*. This theme centres on the need for knowledge particularly in relation to the patient, their diagnosis and treatment. Again in this study participants seem to be indicating that autonomy in relation to the provision of patient care, as opposed to autonomy in relation to other aspects of nursing, such as control over the practice setting or indeed the profession of nursing itself, seem to be most relevant to nurses in practice. Indeed, this seems to be congruent with Kramer, Maguire and Schmalenberg's (2006) earlier definition of clinical autonomy where making independent decisions within the realm of nursing practice best reflects autonomy in nursing practice.

Deeper meaning in relation to clinical nurses' understanding of autonomy in clinical practice is revealed in the findings of a study by Stewart, Stansfield and Tapp (2004). This study conducted in the USA sought to establish how clinical nurses understand autonomy in their everyday clinical practice and work life. Stewart, Stansfield and Tapp (2004), using a qualitative hermeneutic approach, accessed a purposive convenience sample of nurses (n=43) working in a cardiac health service. Focus group discussions (90 minutes long) were recorded and transcribed. Data from the groups were analysed through interpretative phases involving identifying and tracking themes. While thick description, multivocality and triangulation is evident in terms of the rigor of this study (based on Tracy's (2010) criteria for the evaluation of the quality of qualitative research) crystallization and member checking of themes is not evident. While the researchers stated that they expected to find examples of opportunities to exercise independent nursing judgement and practice they actually found that distinct examples of independent nursing practice were limited in the data. Nurses in this

study described their autonomy in terms of interdependent practice towards achieving patient goals. The achievement of patient goals appeared to be central to the focus and understanding of autonomy among the participants, as was their influence, based on their knowledge and skills, towards the achievement of that goal. Stewart, Stansfield and Tapp (2004) found that nurses identified their autonomy in terms of contributing towards and the co-ordination of the overall care of patients. Again, the findings of this study reinforce the fact that, for nurses in clinical practice at least, autonomy is about care of the patient, not influence over the organisation. It also reinforces the idea that autonomy is inclusive of the notion of interdependence towards the achievement of the goals set in terms of patient care.

2.2 Levels of Clinical Autonomy in Nursing

A number of studies have investigated levels of autonomy among nurses in clinical practice including staff nurses and advanced practice nurses. The sample in Kramer, et al's (2006) study (discussed in detail later in this review) also completed an autonomy rating scale (part of the 'Essentials of Magnetism' tool). The overall mean autonomy score was 8.26 (minimum 1, maximum 10) with no significant differences between professional role, hospital or unit type. This indicated that nurses within the sample (all working in magnet hospitals) indicated that they had high levels of clinical autonomy.

Papathanassoglou, et al. (2005) investigated nurses' autonomy regarding technical aspects of care among Hellenic intensive care nurses using the Hellenic Intensive Care Nurses Autonomy (HICNA) Scale on a purposive sample of critical care

nurses (n=1020, response 73%). Reliability of the instrument, constructed for the study was found to be good (Cronbach's alpha=0.86). Face validity for the instrument was established through a panel of experts with content validity through correlation with background factors. Content validity for general autonomy questions was also established through Pearson's correlation. Autonomy scores were found to be moderate (mean 105.24) with the highest scores attributed to basic technical tasks followed by advanced technical tasks and then decision-making. The instrument used is questioned by Weston (2009) in her evaluation of instruments to measure levels of autonomy in nursing. She questions the ability of the instrument to measure clinical autonomy beyond the measurement of autonomy in performing technical tasks rather than decision-making in a holistic sense. In this regard Weston makes an important observation. However, the researchers make no assertions as to the generalisability of their findings. The findings in this study give a useful insight into the levels of autonomy in nursing practice for a particular cohort of nurses, demonstrating varying levels of autonomy from basic tasks to decision-making about patient care thus reflecting the realms in which this cohort at least have the strongest and weakest levels of autonomy.

Another cohort of Greek critical care nurses were also subject to autonomy measurement (*Professional Nursing Autonomy Scale* (PNAS), in a study by Iliopoulo and While (2010) described in detail later in this chapter. They sought to describe the views of critical care nurses on their autonomy along with examining factors related to autonomy. This cohort demonstrated overall moderate autonomy with a mean score of 165.4 (SD=24.6).

A number of studies have investigated the levels of autonomy and have indicated that advanced practice nurses possess high levels of clinical autonomy. Ulrich,

Soeken and Miller (2003) sought to determine nurse practitioners' perceptions of autonomy and to identify predictors of autonomy among nurse practitioners. Using a stratified sampling technique they identified a sample of 585 subjects to whom they sent a questionnaire consisting of the 'Practitioners Perceptions on Ethical Aspects of Managed Care' instrument to measure participants' perceptions of the ethical aspects of managed care and the 'Dempster Practice Behaviours Scale' (DPBS) instrument to measure participants' perception of their level of autonomy in clinical practice. The response rate to this study was 43.4% (n=254) and descriptive and correlational analysis of data were conducted by the researchers. Similar to other studies using the DPBS the instrument was found to have excellent internal consistency (Cronbachs's 0.94). Ulrich, Soeken and Miller (2003) found that while Nurse Practitioners were moderately ethically concerned with managed care (mean=26.3, SD±7.3) they displayed high scores for autonomy in practice (mean=124.2, SD±14.3 (range 30 – 150). They concluded that there was a need to understand the role of ethics in nurses' perceptions of their autonomy in practice while also gaining an understanding of the facilitators and barriers to autonomy.

Cajulis and Fitzpatrick (2007) examined the level of autonomy among a convenience sample (n=86, response 63.9%) of advanced nurse practitioners providing care to adults in an acute care setting in one hospital in the USA. This descriptive study employing a survey design used a questionnaire consisting of the Dempster Practice Behaviours Scale (DPBS) along with a background demographic questionnaire to collect data. The reliability of the DPBS has been established in a number of studies and in this study the Cronbach's alpha for the instrument overall was 0.92. Advanced practice nurses indicated high levels of clinical autonomy (mean score 117.37), comparable to those demonstrated in

similar studies on advanced practice nurses (Ulrich, Soeken and Miller, 2003, Bahdori and Fitzpatrick, 2009; and Maylone, et al, 2010). Those with board certification and post Masters degree qualifications had the highest scores for autonomy among the cohort but no statistically significant correlation was found between the variables. On the basis of finding higher levels of autonomy among participants with higher levels of education the relationship between education and levels of autonomy in clinical practice is worthy of further investigation.

Bahadori and Fitzpatrick (2009) conducted a similar study among a purposive convenience sample of advanced practice nurses working in primary care attending a conference in the USA. The sample size was modest (n=62) with a response rate of 77.4%. The DPBS was also used in this study along with a background data questionnaire. Interestingly, Bahadori and Fitzpatrick found that the reliability of the DPBS was lower than that in other studies with a Cronbach's alpha at 0.79 (0.92 in Cajulis and Fitzpatrick, 2007). Again total mean total scores were high at 127.19 (SD= 4.45). Bahadori and Fitzpatrick (2009) concluded, even with a modest sample, that advanced practice nurses working in primary care had high levels of autonomy but struggled with empowerment (the lowest mean score from cohort on the empowerment subscale of DPBS (25.08, SD=4.85). Taken in isolation the findings of this study cannot be viewed as reflective of advanced practice nurses as a whole and therefore the findings are not generalisable to the advanced practice nurse population. However, the value of these findings is the support that it lends to the findings of other studies examining this cohort (Ulrich, Soeken and Miller, 2003 and Cajulis and Fitzpatrick, 2007) who similarly found high levels of autonomy among advanced practice nurses.

Maylone, et al. (2010) (discussed in detail later in this review) also investigated levels of autonomy among advanced practice nurses in the USA using the DPBS. Their convenience sample was taken from advanced practice nurses attending a national conference (n=100, response 99%). The DPBS was found to have good reliability in this study (Cronbach's alpha 0.95) with good content validity (content validity index 1.00). The high autonomy score (mean 123; SD=12.7) among this cohort is not dissimilar from the samples in the previous studies.

In summary the above studies indicate that nurses have moderate to high levels of autonomy in clinical practice generally but at the specialist or advanced practice levels clinical autonomy appear to increase.

Of particular interest to the present research is the perceived level of autonomy in clinical practice among emergency nurses. A search of the literature reveals a distinct paucity of research investigating the levels of clinical autonomy among emergency nurses. However, when using search terms related to autonomy in terms of decision making in clinical practice two papers were identified that investigated this as part of their studies.

In a quantitative study employing a survey design Browning, et al. (2007) examined the differences among staff nurses, nurse managers and advanced practice nurses in terms of burnout, stress and cognitive adaptation. A number of instruments were applied to a sample of 88 nurse practitioners, 40 nurse managers and 100 emergency nurses working across 30 states in the USA. Among the measures in this study, autonomy and control were measured using an instrument adapted from Motowidlo, Packard and Manning (1986) and Numerof and Abrams (1984) involving 16 items. To assess level of autonomy participants were asked to

rate their level of influence on a 5 point scale from complete influence to no influence at all (Browning et al., 2007). This measure displayed good reliability (Cronbach's = .91). The findings indicated that autonomy was lower for emergency nurses (198.57) than it was for nurse managers (233.80) or advanced practice nurses (236.42). Specifically, emergency nurses displayed the lowest level of control or autonomy in this study.

When compared with general nurses, not working in emergency departments, Adriaenssens, et al., (2010) similarly found lower levels of autonomy in practice among emergency nurses. They conducted a cross-sectional study among emergency and non-emergency general nurses across 15 hospitals in Belgium. A sample of emergency nurses (n=308) and general nurses (n=669) were accessed to address the aim of identifying if emergency nurses differed from general nurses in terms of job characteristics and organisational features and how these are influenced by the specialty setting of participants. Data were collected using the Leiden Quality of Work Questionnaire for Nurses (LQWQ-N) and consisting of 14 subscales including a measure of decision authority (4 items) which is an indicator of autonomy in practice. The reliability of the subscale in measuring decision authority was moderate (Cronbach's 0.70). Focusing in on the autonomy element in this study, the data revealed a significant finding ($p<0.001$) that emergency nurses had lower mean scores (m=10.89, SD=1.55) than general nurses (m=11.68, SD=1.29). While this study did not directly measure the clinical autonomy of participants the findings support the notion that there may be differences between nurses depending on their clinical setting. With this in mind the findings from this study support the need to investigate clinical autonomy of nurses and the issues that influence levels of autonomy in clinical practice.

There appears to be issues specific to emergency nurses emerging that may indicate that the levels of clinical autonomy or autonomy in practice may be lower among this group of nurses. This is surprising when the dynamic and ever changing nature of emergency nursing practice is considered. A dynamic and ever changing clinical environment, such as that encountered in emergency departments, require high levels of immediate decision making among those who work there, including emergency nurses. It would be expected that this cohort among nurses would be displaying high levels of autonomy in their clinical practice.

In summary, the studies examined in this section appear to indicate that, while nurses appear to have moderate to high levels of clinical autonomy (Kramer, et al., 2006; Papathanassoglou, et al., 2005 and Iliopoulo and While, 2010), this is most evident at the advanced practice level (Ulrich, Soeken and Miller, 2003; Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009 and Maylone, et al., 2010). There is also a suggestion that emergency nurses may have lower levels of autonomy than advanced practice nurses or nurses not working in the emergency department (Browning et al., 2007 and Adriaenssens, et al., 2010). It must be noted, however, that there appears to be a paucity of research examining the levels of autonomy in clinical practice among emergency nurses.

2.3 Factors Related to Autonomy in Clinical Nursing Practice

As discussed in the theoretical literature, autonomy in nursing has been loosely defined (Wade, 1999) with a lack of consistency in its understanding (McParland, 2000). What is acknowledged in the literature is the interdependent nature of autonomy in nursing in terms of the relationship to other factors and to other

professionals (Lewis, 2006). Interdependence is viewed in terms of collaboration and working with healthcare colleagues such as the medical profession and will be explored in Chapter 3. The organisational context, practice setting, authority/sanction, and job satisfaction and retention are issues that emerge from the literature in terms of influencing autonomy in nursing practice and will be discussed in this section.

It is important to examine the factors that are principally related to the concept of autonomy in nursing to understand the relevance of the concept to nurses in clinical practice.

The Organisational Context

A mixed methodology study by Kramer and Schmalenberg (2003) sought to establish staff nurses' understanding of autonomy and the organisational context. A sample of 279 staff nurses working across fourteen magnet hospitals in the USA was recruited. All participants were interviewed using open ended questions and were given two 10 point rating scales (similar to pain rating scales) to measure *'job satisfaction'* and *'quality of care on their units'*. The study employed a serial case study design and focused on three related issues namely *control over nursing practice*, *autonomy* and *nurse/physician relationships* due to the fact that, according to Kramer and Schmalenberg (2003), the concepts are related to each other. The open ended questions used for each participant were *"Can you practice autonomously?"* and *"Give an example of a typical situation that illustrates that you practice autonomously?"* Responses to these questions aimed to generate what participants understood as autonomy in their practice. Qualitative analysis of the interviews consisted of continuous comparative and thematic analysis. Interesting

among the findings was that staff nurses spoke of autonomy in terms of the clinical act of nursing rather than in the professional context. They also understood that autonomy in nursing practice extended to practice beyond usual nursing practice. Three major themes were revealed in the analysis: *frequency*, *organisational sanction* and *scope*. In terms of organisational sanction participants viewed this as a facilitator of autonomy in practice. Indeed this is highlighted by one of the respondents who indicated the perception of no autonomy in their practice: *"Too much red tape – policies, procedures, routines; 'the way we usually do things around here' get's in the way of the nurse acting for and in the best interests of the patient"* (pg. 16). The role of the organisation in sanctioning clinical autonomy has also been highlighted in a number of other studies.

Stewart, Stansfield and Tapp (2004) in a qualitative study using an Hermeneutic approach on a purposive convenience sample of 43 nurses working in a cardiac health service in the USA sought to establish how nurses understood autonomy in their every day clinical practice. Data were collected via recorded focus group meetings (lasting 90 minutes approximately). The recordings were transcribed and were analysed by the research team through interpretative phases involving identifying and tracking themes. The study displayed strong rigor based on Tracy's (2010) criteria with thick description, multivocality and triangulation evident in the report. Stewart, Stansfield and Tapp (2004) reported that they found a distinct lack of independent practices among the reports of the focus groups. In terms of autonomy, however, it has been already established in this review that independence in practice alone does not constitute autonomy. It must then be asked why the researchers were seeking examples of independence as exemplars of autonomy. One of the themes identified in this study was that autonomy in

everyday practice was hampered by *'not having a voice'*. Here participants seemed to believe that their expertise and experience were being overlooked when it came to decision-making about patient care, thus negatively impacting on their autonomy. Indeed, this is reflected among the antecedents identified for autonomy in the practice of nurses by Wilkinson (1997) in their concept analysis.

The role of the organisation, and in particular management, in facilitating autonomy in clinical practice was also highlighted by Mrayyan (2004). In a comparative descriptive study examining the role of nurse managers in enhancing the autonomy of hospital based staff nurses Mrayyan accessed a large sample of nurses in the USA, Canada and the UK (n=3615 response 317) and collected data via an electronic survey. A four part questionnaire was administered consisting of an autonomy instrument (Blegen, et al., 1993), nurse managers actions scale (developed for study, Cronbach's 0.88), demographics questionnaire and an open ended question. Supportive management was seen as the most significantly positive factor to enhance autonomy among nurses in clinical practice while autocratic management was viewed as the most negative influence on autonomy of nurses in practice. This finding must be taken in the context of a poor response rate of less than 10%. However it does contribute to the overall belief in the influence of the organisation and all of its constituents, for example management, policies and professions, as having an influence over the autonomy of nurses in practice.

Kaplan, et al (2006) sought to establish if a law that enabled nurses to prescribe controlled drugs in Washington DC (USA) eliminated or created barriers to autonomous nursing practice in respect of prescribing controlled substances. This was a quantitative pre and post test study using a survey method. The researchers developed an instrument based on the literature which they sent to all nurse

practitioners licensed in the State prior to and following the introduction of legislation to enable the prescribing of controlled drugs by nurse practitioners. The response rate for this study was 74.4% (n=1,843). While Kaplan, et al. (2006) state that they established content validity of the instrument through expert consultation and review of the instrument by a recognised centre for health workforce research, the reliability of the instrument does not appear to have been reported. In relation to autonomy with prescriptive authority Kaplan, et al (2006) found that while legislative authority may have facilitated autonomy among nurses in the context of prescribing medications it was hampered by a lack of knowledge and expertise in this realm of practice among the cohort. Here it must be acknowledged that an organisational or legislative sanction in isolation may not be sufficient to enable autonomy among nurses, there also needs to be sufficient education and experience among nurses to act autonomously.

Wilkinson (1997), in explicating their concept analysis of autonomy in nursing practice, believes in the importance of authority from the organisation to act autonomously. Authority to act autonomously often requires permission or sanction to do so within that organisation. Kramer, at al. (2007) sought to identify the structures, practices, environmental factors and interventions that nurses, managers and physicians identify as promoting nurse autonomy. To fulfil their aim Kramer, at al. (2007) employed a grounded theory approach utilising three sources of data namely published literature, operational and evaluation data from the research sites and consensus from experts. The theoretical basis for this study was from Donabedian's '*structure process outcomes'* paradigm. This extensive study accessed a sample of 274 expert participants consisting of staff nurses (50%), nurse managers (25%) and physicians (25%) from 74 different units across 8 magnet

hospitals in the USA. Apart from reviewing documents and literature, data from experts (nurses, managers and physicians) were also collected through interviews with participants who were identified through strategic sampling. Among the findings of this study was the issue of administrative or departmental sanction for clinical autonomy. Here participants revealed that autonomy was not something that can be assumed in the work place and that there was some control over autonomy in terms of authority outside of nursing. Participants in this study indicated that, while the nurse must want autonomy in their practice, this was insufficient for it to be realised and that supportive nurse management and sanction from administration were among important facilitators of autonomy in nurses' practice. This finding carries the weight of a methodologically strong study (based on criteria for qualitative research (Tracy, 2010) and is supported by the findings of other studies in this review.

The issues of organisational support and recognition for autonomy among nurses have also been highlighted by a number of other researchers. Hinno, et al. (2009) conducted a descriptive correlational cross-sectional study to examine nurses' perceptions of their autonomy, control over practice, team-work & organisational support in Estonia. Data were collected via a mailed survey consisting of a questionnaire containing the, Nursing Work Index-Revised (NWI-R) instrument and a demographics section on a stratified random sample of nurses working in Estonia (n=840). The response rate was 56.9% constituting 9.23% of the entire nursing population in Estonia. The instrument was translated into the Estonian and Russian languages with the rigor of the instrument re-evaluated by the researchers. Among the findings of this study was that 86% of respondent nurses indicated that the presence of good organisational support for nurses led to high levels of

autonomy among nurses. This finding adds support to the important role of the organisation or context in which the nurse operates on their level of autonomy. Entwined with organisational support is the issue of recognition of nurses in terms of the education, experience and overall contribution to patient care. Stewart, Stansfield and Tapp (2004) in a study described earlier reported that respondents identified a lack of recognition of the knowledge and overall contribution to care of nurses as a barrier to the clinical autonomy of nurses. This lack of recognition of the knowledge and ability of nurses is reflected in the earlier described study by Kaplan, et al. (2006). They found that the fifth most significant barrier to the clinical autonomy of nurses in prescribing controlled drugs was that care providers were reluctant to use medication prescribed by nurses. This reflects a lack of recognition of the education, experience and legitimate right to practice in the area of medication prescribing among the cohort in this study.

The lack of recognition of the contribution of nurses to decisions about care is reflected in a study by Attree (2005) who explored nurses' perceptions of the standards of nursing practice and the factors affecting those standards. This was a qualitative study using a grounded theory approach. Data were collected from a sample of 142 nurses using semi structured interviews. One of the principal findings in this study was that nurses perceive that they have little or no influence over nursing practice and care decisions. Not having influence over the standards of care reflects a lack of recognition of nurses thus inhibiting their autonomy in deciding on nursing care issues.

Kaplan et al. (2006) discuss the continued resistance to the growth of autonomous practice of nurses and indeed this may be a reason for lack of recognition of the knowledge and contribution that nurses have to make in terms of performing

autonomously in clinical practice. Norris and Melby (2006) in their study (described later) found that resistance to the development of an advanced practice nursing role is viewed as a barrier to the development of clinical autonomy among nurses. Participants in this study identified resistance from doctors and radiology staff as significant barriers to expansion of the autonomy of nurses. Interestingly, they also found that nurses were a source of conflict and a barrier to clinical autonomy.

In summary there is evidence that the organisational context appears to influence autonomy among nurses. It is certainly evident that sanction from the organisation within which a nurse is employed is related to the perceived level of autonomy among nurses within that organisation (Kramer and Schmalenberg, 2003 and Stewart, Stansfield and Tapp, 2004 and Kramer, et al., 2007). Management in particular appear to have a role in facilitating autonomy among nurses in practice (Mryyan, 2004). The role of the organisation and management within the organisation does not cease at granting sanction for autonomy among nurses in practice. The need for support from the organisation (Hinno, et al., 2009) as well as recognition of nurses' knowledge and education (Stewart, Stansfield and Tapp, 2004; Attree, 2005 and Kaplan, 2006) is also evident in the literature.

The Practice Setting

Mrayyan (2004), in their comparative descriptive study (described earlier) sought responses to an open-ended question to identify three factors that they considered either to facilitate or hinder autonomy. Respondents indicated that they found workload issues related to staffing levels (reduction) and increased workload within the practice setting to be a significant barrier to autonomy. While this theme

emerged from an exploratory open ended question in Mrayyan's study it is reflected in other research that examined the influence of the practice environment on the autonomy of nurses in practice.

Advanced practice nurses in a study by Plager and Conger (2007) revealed that the practice setting can constrain the ability to make choices on patient care options as well as the delivery of holistic care. In a qualitative study using interpretive phenomenology Plager and Conger (2007) sought to investigate the outcomes of advanced practice nurse graduate programme from a university in the USA. All graduates from a university Masters Degree programme were invited to participate (n=40) with a 75% response rate. Data were collected from five focus groups and 14 individual interviews all lasting between 1 and 2 hours. Focus groups and interviews were audio-taped and transcribed verbatim. Data were analysed by 2 researchers independently and analysis and interpretation was based on thematic analysis, identification of exemplars and paradigm cases. As part of a secondary analysis of the data Plager and Conger (2007) uncovered that the practice setting itself negatively affected participants' autonomy in providing holistic care for patients. In terms of relating this to the greater understanding of autonomy and the idea that nurses practice within a greater social context, it is clear that the influences on the autonomy of nurses can extend to those who influence the work setting and environment of nurses.

Papathanassoglou, et al. (2005) found that autonomy in clinical practice can vary from practice setting to practice setting. In this Greek study Papathanassoglou, et al. (2005) used an exploratory descriptive correlational design with additional cross-sectional comparisons to investigate Hellenic intensive care nurses' autonomy regarding technical aspects of care. They accessed a purposive sample of

all intensive care nurses in Hellas (n=1020) with a 73% response rate (n=807). Data were collected via a questionnaire consisting of the Hellenic Intensive Care Nurses Autonomy (HICNA) Scale (developed for the study) and a demographics questionnaire. Reliability for the HINCA was calculated using Cronbach's alpha = 0.86, split half = 0.81/0.76, while the face validity was sought from a panel of experts. Content validity was calculated through correlation with background factors (Pearson's r=0.47, p=0.01; education, r=0.39, p=0.01; ICU experience, r=0.53, p=0.007) and general autonomy questions (r=0.6-0.72, p<0.05). A test retest on a random sample was also conducted (r>0.88) as well as a McNemar test for significant differences between responses (p>0.1). Apart from finding moderately high levels of autonomy among the sample the researchers found variance in levels of autonomy even between different types of critical care areas thus showing the influence of the practice setting. Here Papathanassoglou, et al. (2005) identify that influence on decision making differs between units and unit types used within the study.

Issues such as a clear articulation of the role of nurses as well as clearly identified guidance for practice within the practice setting also seem to have an effect on the autonomy of nurses. Norris and Melby (2006) conducted a mixed methods exploratory study to explore the opinions of nurses and doctors working in an emergency department on the introduction of acute care nurse practitioners. Data were collected via a questionnaire (n=98) along with interviews with 6 participants. A finding from this study was that without clear role identification there would be limitations to the autonomy of the acute care nurse practitioners. Along with role identification in terms of facilitating autonomy among nurses was the issue of articulating role expectations. This has also been identified in the study by Stewart,

Stansfield and Tapp (2004) (described earlier). Informants in this study believed that clear articulation of what was expected of nurses in the practice setting would facilitate their clinical autonomy (Stewart, Stansfield and Tapp, 2004).
Kramer, et al. (2007) found in their evidence based practice management study (described earlier) that nurses sought the development of order sets and protocols for specific situations. Another structure viewed as enabling autonomy among respondents in this study was the defining of nurses' scope of practice. The practice setting, including guidance on what is expected of nurses within that environment, seems to be viewed as having an influence on autonomy among nurses in practice. Conversely an absence must therefore have a negative influence on the autonomy of nurses in practice.

Stewart, Stansfield and Tapp (2004), in a qualitative study taking a Hermeneutic approach described earlier, found that nurses valued protocols for over the counter medication as facilitators of clinical autonomy. It may be argued that protocols and directives may remove or negate clinical autonomy but in the wider realm of multidisciplinary care may offer nurses the opportunity and authority to exercise decision making on patient care options. Decisions on medication management have traditionally been outside the realm of nursing practice but, in terms of a shared sphere of practice, protocols give nurses some control over the decision to, with regard to medications at least, administer medication based on her/his own judgement as a nurse. The acknowledgement of the practice setting, be that from management or physicians, that nurses may have the ability to determine, based on assessment and knowledge, when a patient needs a particular medication does confer a certain autonomy on nurses. Here the determination that the patient needs

the medication and the decision to administer it lies with the nurse, thus enhancing autonomy.

There also appears an undercurrent of authorisation to nurse or practice autonomously within this theme. Indeed the development of protocols and orders sets (Kramer and Schmalenberg, 2003 and Stewart, Stansfield and Tapp, 2004) alludes to permission for clinical autonomy. This is what Kramer and Schmalenberg (2003) describe as 'organisational sanction'.

In summary, it is clear that the workplace and the organisation governing the workplace have a significant role to play in the clinical autonomy of nurses. Allowing nurses a voice when it comes to care decisions, the authority to practice nursing without undue external influence and a practice environment that facilitates the exercise of clinical autonomy would represent support for the clinical autonomy of nurses. Clear articulation of nursing roles and expectations along with supportive directives and protocols is recognised as facilitating the clinical autonomy of nurses. However, the issue of organisational authority/sanction requires further exploration and is addressed next in this review.

Authority/Sanction

A number of studies identify what can be described as authority for clinical autonomy among nurses. Kramer et al. (2007) identified administrative or departmental sanction for autonomy in clinical practice as a facilitator of clinical autonomy. This suggests that, for nurses at least, clinical autonomy is something that is ultimately controlled outside of nursing. Attree's (2005) findings (from a study described later) support this as nurses believed that practice was controlled from outside the profession. In a grounded theory study to explore nurses'

perceptions of the standards of nursing practice and the factors affecting those standards Attree accessed a sample of 142 nurses. Through semi-structured interviews participants indicated that the real control over the profession and the standards of practice was held by 'external agents', specifically 'non-nursing managers'.

Kramer and Schmalenberg (2003) found that organisational authority can have both a positive and a negative influence on the clinical autonomy of nurses. Using a mixed methods approach the researchers collected both quantitative and qualitative data. The researchers sought to establish staff nurses' concept of autonomy while also quantifying their level of autonomy and if a relationship existed between their level of autonomy and quality of care and job satisfaction. The purposive sample of 279 nurses indicated that some nursing activities were positively authorised by the organisation with positive feedback supporting this authority. However, they also found that some clinical activities were strongly controlled by the organisation. One respondent quote to illustrate this point *"we can't do anything for the patient without the doctor's permission"* (pg. 16) is not only indicative of the role of authority to practice but also the role of interprofessional relationships and control.

In a qualitative study using Leininger's ethnographic approach Gagnon et al. (2010) sought to explore oncology nurses' perception of autonomy and to explore how it is developed and exhibited. They accessed a purposive convenience sample of 15 nurses (all female) currently or previously working as primary oncology nurses in a Canadian regional cancer centre providing outpatient cancer services. Data were collected using semistructured interviews (lasting 30 to 60 minutes) and through the observation of practice. Data were analysed using Leininger's process

of analysis where descriptors about the subject area from the first interview formed the coding for the subsequent transcripts. Context for responses was established on 'job shadowing' where the researchers accompanied participants in clinical practice. Participants reported that clinical autonomy was facilitated through *'authority from administration'.* They also identified '*supportive trusting relationships'* as important facilitators of autonomy. However, respondents in the study by Plager and Conger (2007), described earlier, view organisational authority as a negative influence over the clinical autonomy of nurses. Respondents to the focus groups and telephone interviews in their study identified that organisational authority, where permission to practice autonomously was controlled by the organisation, negatively impacted on the clinical autonomy of nurses.

Compounding the issue of authority appears to be the lack of influence that nurses' seem to have over nursing practice. Nurses describe not having a voice as a significant barrier to clinical autonomy in their practice settings. One of the findings in a qualitative study by Stewart, Stansfield and Tapp (2004) (described earlier) was that nurses perceived not having the ability to raise concerns as an issue that negatively influenced their clinical autonomy. Under the theme *'not having a voice'* Stewart, Stansfield and Tapp (2004) describe how respondents indicated that they were not being listened to or where their expertise and experience was being ignored in clinical discussions about their patients as being a significant barrier to their autonomy. In terms of availing of an opportunity to have their voice heard respondents in Stewart, Stansfield and Tapp's study indicated that patient rounds that enabled nurses to input their clinical findings and raise concerns allowed them to make contributions, in other words 'have a say', and enabled their clinical autonomy.

Mrayyan (2004) in a comparative descriptive study described earlier also found that open communication was perceived as being important to supporting autonomy among nurses. One of the aims of this study was to identify what nurse managers' actions were perceived as enhancing autonomy among nurses. Respondents indicated that they perceived that the nurse managers' action that most influenced their autonomy was *'encourages nurses to communicate openly with all members of the healthcare team'* (mean 3.79, SD 1.30). This finding highlights the importance nurses place on having a say and being heard among the healthcare team. Indeed, Mrayyan (2004) also found that 21% of her sample of nurses indicated that an autocratic management style was the single most important barrier to their autonomy. Autocratic management styles espouse central control over subordinates without allowing them influence over decisions or decision-making or *'having a say'*.

Attree (2005) in a grounded theory study sought to explore nurses' perceptions of autonomy. One of the aims of this study was to understand how autonomy in nursing practice was developed. The sample consisted of 142 nurses practicing in medical/surgical and care of the elderly units across three National Health Service (NHS) hospitals in England. Data were collected through semi-structured interviews which were recorded and data were analysed through constant comparative analysis, consistent with classical grounded theory. Among the themes to emerge was that nurses believed that they had little or no say over nursing or 'lack of say'. Respondents in this study perceived that a lack of say resulted in a lack of influence over decisions where their voice was not being heard.

Job Satisfaction and Retention

Finn (2001) believes that job satisfaction is a consequence of autonomy in nursing practice. In a descriptive survey Finn sought to establish some baseline data on autonomy and job satisfaction among nurses. Using a convenience sample of 320 nurses (with a response of 178 nurses) working in a large teaching hospital in Brisbane Australia, Finn measured importance of work components using a modified version of the Index of Work Satisfaction instrument developed by Stamps and Piedmonte (1986). The work components measured by this instrument consist of *pay, autonomy, professional status, interaction, task requirements* and *organisational policies*. Finn reports that the validity of the instrument was reached through varimax rotation factor analysis and the reliability of the instrument was determined using Chronbachs alpha (0.52 – 0.81) by the original developers of the instrument. Finn modified the instrument and determined the reliability of the individual components of the instruments using Cronbach's alpha (autonomy = 0.7636, professional status = 0.5633, interaction = 0.7466, task requirements = 0.7538, organisational policies = 0.6298 and overall job satisfaction = 0.8778). The single most important component for nurses in terms of job satisfaction was autonomy among this sample (weighted co-efficient 3.64, mean 4.64, SD=0.99). Finn further supports their own findings by comparing their results with two other studies (Stamps and Piedmonte, 1986 and; Goodell and Coeling, 1994). In Stamps and Piedmonte's (1986) study particpants also ranked autonomy as the most important component in job satisfaction while participants in Goodell and Coelings (1994) study ranked autonomy second.

Hayhurst, et al. (2005) sought to compare the factors associated with nurses' decision to stay or leave a hospital or unit. A convenience sample of 692 nurses working in a tertiary hospital in California were accessed for the study and received a questionnaire consisting of the Moos' Work Environment Scales (WESs) (to determine work environment factors) and a demographic section to establish the characteristics of the sample. The response rate was 39% (n=272) with the majority of respondents being women (96%) between the ages of 40 and 49 years (44%). A subscale of the 'WESs' measured autonomy in this study. A comparison was made between nurses who stayed and those who had left the hospital. Hayhurst, et al. (2005) determined that there was a difference between the two groups with nurses who stayed reporting higher levels of autonomy in their practice (m = 5.1, SD = 2.0) as opposed to nurses who had left during the previous 18 months (m = 4.9, SD = 1.6). Hayhurst, et al. note that this finding did not reach statistical significance in their analysis (t = 0.6, p = 0.58).

In a descriptive correlational study on a purposive sample of 200 nurses (response 73%) in the USA Zurmehly (2008) sought to investigate the relationship between levels of job satisfaction, educational level, perception of autonomy and critical thinking skills among nurses. Questionnaires were distributed that included a demographic section and the *'Watson-Glaser Critical Thinking Appraisal'* instrument, that measured participants' critical thinking ability, and the *'Minnesota Satisfaction Questionnaire'*, that measured participants' job satisfaction. The latter part of the questionnaire measured job satisfaction and autonomy and displayed moderate to strong reliability for its subscales. Of interest to the consequences of clinical autonomy was the statistically significant finding of the positive relationship between job satisfaction and autonomy (r=.538, p<.05).

Mosely and Paterson (2008) identified a relationship between autonomy and nurse retention. In a review of the literature they sought to explore the issues that result in older nurses leaving an organisation or the profession itself prematurely. Using an extensive search strategy across multiple databases Mosely and Paterson (2008) identified 215 papers that could potentially inform their exploration. Following a review of abstracts 38 papers were selected on the basis of meeting criteria for inclusion. All papers were rated by Mosely and Paterson (2008) using assessment criteria for quantitative and qualitative research. Among the issues identified in Mosely and Peterson's review is autonomy. Despite not presenting or offering a collation of data from studies in the report they determined that retention of staff was empirically linked with autonomy. This conclusion is borne out in a number of studies investigating this issue.

In a study to describe the views of Greek critical care nurses on their autonomy and to examine factors related to their autonomy Iliopoulo and While (2010) conducted a survey on a convenience sample of 403 critical care nurses working in Athens. Data were collected using a questionnaire comprising of the *Professional Nursing Autonomy Scale* (PNAS), the *Role Conflict and Ambiguity Scale*, a *Job Satisfaction Scale* as well as a demographics section. Questionnaires were distributed through managers and were collected locally resulting in a 70% response rate (n=302). Reliability of the PNAS and the Role Conflict and Ambiguity Scale were moderate (Cronbach's 0.88 and 0.83-0.81 (respectively) while the reliability of the Job Satisfaction Scale was also moderately strong (Cronbach's 0.89). This study found that there was a moderate correlation between autonomy and job satisfaction ($r=-0.331$, $P<0.001$) among this sample of critical care nurses. This finding reflects Zurmehly's (2008) results in that autonomy in practice among nurses creates a

positive attitude towards clinical practice. It must be considered that this is something that nurses would desire in terms of being satisfied with their role and work as a nurse in clinical practice.

According to Brunetto, et al. (2011) 'affective commitment' refers to "the emotional attachment to, and identification with, an organisation" (pg. 231) and is an indicator of turnover intention among staff, therefore related to retention of nurses. In a study using a cross-sectional survey design Brunetto, et al. (2011) sought to examine nurses' levels of satisfaction with their communication with supervisors and their perceptions of autonomy and affective commitment in the context of healthcare reforms in Australia. A survey of 900 nurses working in private hospitals in Australia was conducted. A number of instruments were administered to collect data. Of interest to this present study are the measures of autonomy and affective commitment within the overall Brunetto, et al. (2011) study. Autonomy was measured using Spreitzer's (1996) measure of 'self determination' (Cronbach's 0.895) while affective commitment was measured using Allen and Meyer's (1990) instrument (Cronbach's 0.87). One of the hypotheses proposed in this study was that "there is a significant positive relationship between nurses' perception of autonomy and their levels of effective commitment" (pg. 231). In terms of this hypothesis Brunetto, et al. (2011) conducted a linear regression analysis on the data from the measures of autonomy and affective commitment. This supported the hypothesis indicating that there was indeed a significant positive relationship between levels of autonomy and the affective commitment of nurses or their intention to leave.

In summary, the studies reviewed in this section identify the relationship that autonomy has with issues such as nurse retention and nurse satisfaction with their

roles and work. Findings from these studies emphasise the importance of this concept to nurses individually and collectively as a profession.

Conclusion

The issues related to the clinical autonomy of nurses are evident from the literature. Plager and Conger (2007) found that the practice setting can influence nurses' ability to practice autonomously while Papathanassoglou, et al. (2005) found that levels of clinical autonomy varied from practice setting or practice unit to practice unit. A closer examination of the literature indicates that specific characteristics of the practice environment in terms of recognition of nurses' contribution and support of their clinical autonomy may indicate that these unit or organisational specific characteristics may be the source of facilitation or inhibition of the clinical autonomy of nurses (Kramer and Schmalenberg, 2003; Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004; Papathanassoglou, et al., 2005; Attree, 2005; Kaplan, et al., 2006; Kramer, et al., 2007; Plager and Conger, 2007; Gagnon, et al., 2010). Nurses' themselves may be a major influence on their own autonomy in practice and it is important to establish if experience or indeed education (Kaplan, et al., 2006) have a role in influencing the autonomy in the clinical practice of nurses.

Summary

The empirical literature on nursing reviewed in this chapter gives some insight into the issue of autonomy for nurses. Firstly, the literature demonstrates that autonomy in the act of providing clinical nursing care appears to be of most relevance for

nurses (Mrayyan, 2004; Stewart, Stansfield and Tapp, 2004; and Skår, 2009). Interdependence in terms of working with other professionals in healthcare was evident as congruent with autonomy in nursing practice (Stewart, Stansfield and Tapp, 2004) and this is reflective of the theoretical perspectives on autonomy in nursing.

A number of studies presented investigated the levels of autonomy among nurses from a variety of settings. The evidence indicates that nurses working in 'magnet' designated hospitals (Kramer, et al., 2006), intensive care (Papathanassoglou, et al., 2005; and Iliopoulo and While, 2010) and at advanced nursing practice levels (Ulrich. Soeken and Miller, 2003; Cajulis and Fitzpatrick; 2007; Bahadori and Fitzpatrick, 2009; and Maylone, et al., 2010) demonstrate higher levels of autonomy in practice. However there is evidence indicating that emergency nurses appear to have lower levels of autonomy in clinical practice than nurses working at advanced practice and management levels (Browning, at al., 2007) and in general medical and surgical clinical settings (Adriaenssens, et al., 2010). These studies indicate that autonomy in clinical nursing practice is not universal at differing practice levels nor across practice settings. Therefore the empirical literature relating to the issues that influence the autonomy of nurses in practice were examined.

The first issue to emerge as influencing the autonomy of nurses in clinical practice was the *organisational context* in which nurses' practice. Organisational issues such as policies, procedures, routines (Kramer and Schmalenberg, 2003), being allowed to contribute to patient care decisions (Stewart, Stansfield and Tapp, 2004), a supportive management who sanction and recognise nursing autonomy and the contribution that nurses make to patient care (Mrayyan, 2004; Attree, 2005;

Kramer, et al., 2007; and Hinno, et al., 2009) and a recognition of nurses knowledge, education and experience (Stewart, Stansfield and Tapp, 2004; Attree, 2005; and Kaplan, 2006).

The next issue to emerge from the literature relating to the autonomy of nurses in practice is the *practice setting* itself. Nurses working in similar specialty areas at different units in the same geographical area have been found to have different levels of autonomy in clinical practice (Papathanassoglou, et al., 2005). Workload issues relating to staffing levels and workload influences the levels of autonomy among nurses (Mrayyan, 2004). Positive facilitators of nursing autonomy have been found in some practice settings such as clear articulation of the nurses role (Stewart, Stansfield and Tapp, 2004; Norris and Melby, 2006; and Kramer et al., 2007) and supportive policies, procedures and protocols (Stewart, Stansfield and Tapp, 2004).

The third major influence on the clinical autonomy of nurses to emerge from the literature is *authority/sanction* to practice. A number of studies have identified that authority or sanction for clinical autonomy of nurses comes from outside of the profession (Kramer and Schmalenberg, 2003; Attree, 2005; and Kramer, et al., 2007). There is diverging evidence as to whether sanction or authority for clinical autonomy among nurses is a positive influence (Gagnon, et al., 2010) or a negative influence (Plager and Conger, 2007). Sanction and authority also emerged in terms of having the authority to communicate openly about patient care within the healthcare team (Stewart, Stansfield and Tapp, 2004; and Mrayyan, 2004).

Finally, *job satisfaction* (Finn, 2001) and nurse *retention* (Hayhurst, et al., 2005; Mosely and Paterson, 2008; and Brunetto, et al., 2011) emerged as related to

clinical autonomy among nurses. The research in this area indicates that levels of clinical autonomy can have a positive influence on nurses themselves while also improving the ability of employers to retain nursing staff.

Not addressed in this chapter is the issue of the relationship of nursing with physicians. It has already been established that a contemporary understanding of autonomy in clinical nursing practice acknowledges that autonomy does not equate to independence. The relationship of the nursing profession with other professions, particularly medicine, is a significant factor in exploring autonomy in clinical practice among nurses. It is therefore important to address the issue of collaboration and how it relates to autonomy in clinical practice among nurses. The following Chapter presents a review of the literature relating to the relationship between nurses and physicians. Both theoretical and empirical literature related to the nurse/physician relationship is examined and presented with a focus on how that relationship influences the clinical autonomy of nurses.

Chapter 3

Nurse/Physician Collaboration

Introduction

A review of the theoretical literature as well as specifically the definitions of autonomy used in nursing reveals that nurses do not work independently in the provision of patient care. Indeed, within the definition of clinical autonomy offered by Kramer, Maguire and Schmalenberg (2006) "*to make independent clinical decisions in the nursing sphere of practice and interdependent decisions in those spheres where nursing overlaps with other disciplines"* (p.480), is an acknowledgement that there exists an interdependence with other disciplines in providing care for patients. However, Dempster (1994) in her definition of autonomy in nursing practice defines the nature of that relationship in stating that autonomy is *"a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviours"* (pg. 227). By placing the nature of the relationship between nursing and other professions involved in the delivery of care in those terms Dempster highlights that the relationship is not one of subservience on the part of nurses. It is therefore pertinent to review studies which have explored this issue.

The literature reviewed in this Chapter will be divided into theoretical literature and empirical literature. The first section of this chapter will address the theoretical perspectives surrounding collaboration. To understand the concept of collaboration and how it appears to have a significant relationship with autonomy in the clinical practice of nurses it is firstly important to explore definitions of collaboration. This will be addressed in section 3.1 of this Chapter. To create a greater understanding

of the concept and how it relates to this study a concept analysis was conducted on Nurse/Physician collaboration and is presented in section 3.2.

The empirical literature on the Nurse/Physician relationship is presented in the second section of this Chapter. Firstly the nature of the nurse/physician collaborative relationship is examined followed by nurses' perceptions of this relationship. The relevance of Nurse/Physician collaboration in the context of the present study on clinical autonomy among emergency nurses is then examined in section 3.5 where research examining the relationship between both of these concepts is presented.

Finally, a summary of the literature reviewed in this study will be presented along with a conclusion to the literature review chapters overall.

Section A Theoretical Perspectives on Nurse/Physician Collaboration

3.1 Definition of Nurse/Physician Collaboration

El Sayed and Sleem (2011) view collaboration as a partnership between both parties in a relationship. These authors defined collaboration *"...as the process of joint decision-making among independent parties, involving joint ownership of decisions and collective responsibility for outcomes".* (pg. 140). Here there is an acknowledgement of the independence of those involved in the decision-making process without any subservience assumed in the relationship. Collaboration in this definition involves not only partnership in the decisions made but also shared responsibility for the decisions made.

Varizani, et al. (2005) offer the following definition of collaboration between nurses and physicians *"...as an interaction between doctor and nurse that enables the knowledge and skills of both professionals to synergistically influence the patient care being provided"* (pg. 71). There is an acknowledgement of the professional status of the nurse in this definition placing nurses on an similar footing to physicians in terms of status. This goes to the heart of the nature of the relationship between physicians and nurses and the dynamic evolving within that relationship. Varizani, et al. (2005) indicate that both professions have a knowledge and skill base that differ and at the same time have something to offer patient care. The use of the word 'synergistically' conveys a belief that the professions work together in a collaborative relationship. While each profession has their own set of skills and knowledge to bring to patient care there are overlaps that work together in influencing care. This definition is reflective of definitions of autonomy in clinical nursing practice that acknowledge levels of independence within a specific professional realm but the existence of overlap between the professions (Kramer, Maguire and Schmalenberg, 2006; Weston, 2008) where an interprofessional relationship should exist.

The definition that will be utilised in this current study is the one proposed by Ushiro (2009) who defines Nurse/Physician collaboration as *"...actions related to sharing information about patients, participating in decision-making concerning patient care, and providing comprehensive care to patients from a patient centred perspective".* (pg. 1499). Ushiro's definition is developed from the belief in the demonstration of collaborative behaviours among the professionals and is based on three constructs: *"sharing of patient information, joint participation in the decision-making process* and *cooperativeness"* (pg. 1499). According to Ushiro

(2009), information is the basis of decision-making in patient care. This relates to autonomy in terms of having the capacity to make decisions in the 'nursing realm' (Weston, 2008) while also contributing to the overall care of patients in the areas of overlap with physicians. Joint participation in the decision-making process relates closely with autonomy in nursing practice where nurses have a say in patient care (Skår, 2009). Finally, cooperativeness relates to the nature of the relationship between nurses and physicians. Cooperativeness assumes a relationship that is of mutual respect without the demonstration of divergence in the power dynamics between the professions (Martin, et al. 2005; Thomson, 2007).

In considering the definitions of collaboration between nurses and physicians there appear to be congruence between autonomy in clinical practice and collaboration, despite what Martin, et al. (2005) believe to be incongruent concepts. Evidence for the relationship between collaboration and autonomy in clinical practice is found among studies on autonomy in nursing.

3.2 Concept Analysis of Nurse/Physician Collaboration

For the purposes of this current study it is important to create an understanding of the concept of Nurse/Physician collaboration. During a search of the literature two concept analyses of collaboration were identified. Henneman, Lee and Cohen (1995) examined the concept of collaboration using the method described by Walker and Avant (1988). The concept was not specifically examined in relation to the Nurse/Physician relationship per se but it is useful to examine the perspective offered by Hennemann, Lee and Cohen (1995).

Petri (2010) conducted an analysis of the concept 'Interdisciplinary Collaboration' using an inductive approach. The method employed by Petri (Rogers' Evolutionary View of Concept Analysis) was utilised to clarify the key issues in relation to collaboration. In Petri's review 89 papers (published between the years of 1996 and 2007) were retrieved and reviewed.

As will be demonstrated later in this Chapter, nurse/physician collaboration is relevant in terms of influencing the clinical autonomy of nurses. In terms of understanding this concept it is necessary to conduct a focused examination of this concept. A concept analysis using Walker and Avant's (2005) method and synthesising the work of Henneman, Lee and Cohen (1995) and Petri (2010) is presented in this section. Henneman, Lee and Cohen's (1995) and Petri's (2010) concept analyses are examined, critiqued and brought together in this section to develop an updated understanding of nurse/physician collaboration for this study.

Defining Attributes of Nurse/Physician Collaboration

Petri (2010) identified three defining attributes of interdisciplinary collaboration while Henneman, Lee and Cohen (1995) identified nine attributes. The first attribute identified by Petri is that collaboration is a 'problem-focused process'. Here Petri asserts that collaboration is based on an interaction between the professions in healthcare. There is an acceptance by Petri that collaboration as a relationship process evolves over time and is echoed by Henneman, Lee and Cohen (1995) in identifying 'willing participation' as an attribute of collaboration. This is linked with Petri's next attribute, 'sharing', meaning equal involvement by all disciplines providing health care. Through sharing there is a transfer of information between the professions as well as a sharing of responsibility for patient care. Petri

believes that in sharing, the perspectives of all involved in the delivery of health care are not only respected but taken into account in the absence of hierarchical pressure from some disciplines.

Henneman, Lee and Cohen (1995) concur with Petri's (2010) perspectives in a number of their identified attributes namely 'shared planning and decision making', 'non-hierarchical relationships', 'shared responsibility' and 'power is shared, based on knowledge and expertise versus role or title'. There is an acknowledgement by Henneman, Lee and Cohen (1995) that sharing of decision making needs to be coupled with sharing of responsibility. There is also an acknowledgement by Henneman, Lee and Cohen (1995) that there may be power dynamics at play in terms of the collaborative relationship. From a Nurse/Physician collaboration perspective it may be a situation where physicians take a position of professional superiority over nurses which may affect the sharing of decisions and responsibility over patient care thus affecting the goal of the organisation within which both disciplines work. Information is key to the decision making process and this is acknowledged by Petri (2010). Ushiro (2009) supports the importance of sharing information by identifying that information is closely linked to problem-solving and the decision making processes.

Finally, Petri (2010) identifies 'working together' as the final attribute of collaboration. This attribute assumes co-operation between the disciplines as being vital for the achievement of organisational goals. Petri believes that each discipline should be recognised for their unique contribution to the overall delivery of patient care. This attribute also features strongly in Henneman, Lee and Cohen (1995) concept analysis. Their attributes include 'joint venture', 'cooperative endeavour', 'team approach', 'contribution of expertise' and 'non-hierarchical relationships'.

These attributes acknowledge, like Petri, that each contributor in a collaborative relationship has a unique contribution to make. In terms of the Nurse/Physician collaborative relationship this will mean that both nurses and physicians acknowledge and respect each other's knowledge, perspective and expertise. Ushiro (2009) shares the belief in the importance of the basis on which the collaborative relationship is built. In terms of Ushiro's understanding of Nurse/Physician collaboration she identifies 'joint participation in the decision-making process' and 'cooperativeness' as core concepts within Nurse/Physician collaboration.

Based on the examination of Hennemann, Lee and Cohen's (1995) and Petri's (2010) work as well as the perspectives offered by Ushiro (2009) the following attributes of Nurse/Physician collaboration are proposed:

- Shared information, decision-making and responsibility for patient care between nurses and physicians
- Shared respect for knowledge, expertise and perspective between nurses and physicians
- Shared power within the Nurse/Physician collaborative relationship built on co-operation and in the absence of hierarchical relationships between nurses and physicians

Antecedents to Nurse/Physician Collaboration

Petri (2010) noted that there appeared to be many more antecedents to interdisciplinary collaboration than there were attributes. Henneman, Lee and Cohen (1995) reflect this also in identifying more antecedents than attributes.

According to Petri the most common antecedent to interdisciplinary collaboration in the literature appeared to be 'interprofessional education'. Petri acknowledges that there is acceptance in the literature that interprofessional education in either the pre qualification or post qualification setting is important in socialising the professions to the contribution each makes to health care delivery. However, Henneman, Lee and Cohen (1995) do not identify the role of interdisciplinary education among their antecedents to collaboration.

'Role awareness' does feature in both concept analyses. According to Petri (2010) 'role awareness' encompasses awareness of knowledge and skills of own and other disciplines including an awareness of the responsibilities of all disciplines in healthcare. This antecedent is also acknowledged by Henneman, Lee and Cohen (1995) in identifying *'understanding and acceptance of one's own role and expertise'* and *'recognition of the role and boundaries of one's discipline'*. Where both concept analyses differ is in the emphasis on role recognition. Petri (2010) believes that recognition of roles extends beyond recognition of own role to understand the roles of others in the multidisciplinary team. However, this does not emerge in Henneman, Lee and Cohen's (1995) analysis where they focus on the recognition of own professional role alone.

'Interpersonal relationship skills', according to Petri (2010), is based on respect , trust and effective communication between the professions. Petri (2010) identifies that interpersonal relationship skills are not built on any dominance by any individual profession within the relationship. Again, Henneman, Lee and Cohen (1995) display congruence with Petri's (2010) identification of this antecedent by identifying *'effective group dynamics including excellent communication skills, respect and trust'*. Here both concept analyses continue to draw attention to a

mutuality based on respect, trust and communication between the professions. In the case of the Nurse/Physician collaborative relationship it links with what Ushiro (2009) identifies as a core element of the Nurse/Physician collaborative relationship; *'cooperativeness'*.

The next antecedent identified by Petri (2010) does not appear to be clearly articulated. *'Deliberate action'* is stated to be required for interdisciplinary collaboration to be a success. According to Petri (2010), interdisciplinary collaboration appears to require effort by those involved for it to grow and flourish and is closely linked with team-building activities. Henneman, et al. (2010) identify an *'environment with team orientation'* which may reflect what Petri (2010) identifies as an antecedent.

Finally, Petri (2010) identifies *'support'* as an antecedent to interdisciplinary collaboration. Here there is ready agreement from Henneman, Lee and Cohen (1995) who identify *'organizational values include participation and interdependence'* and *'visionary leaders supportive of autonomy'*. These antecedents link very closely with the preceding antecedent 'deliberate action' in that support from the organisation and leaders who champion collaboration within that organisation are necessary for collaboration to exist. Interestingly, Henneman, Lee and Cohen (1995) raise the issue of autonomy in their identification of an antecedent. This further highlights the closeness of the concepts of clinical autonomy and Nurse/Physician collaboration.

Based on the work of Henneman, Lee and Cohen (1995) and Petri (2010) as well as the other work examined in this review a number of antecedents of Nurse/Physician collaboration can be identified:

- Effective communication between nurses and physicians
- An awareness among nurses and physicians of each other's roles
- Mutual respect, understanding and acknowledgement between nurses and physicians
- Organisational encouragement and support for Nurse/Physician collaboration
- Shared education in the workplace between nurses and physicians

Consequences

Henneman, Lee and Cohen (1995) state that the consequences of collaboration had not been well studied and that they were merely theoretical. However, work since that time is used to support the consequences of interdisciplinary collaboration identified by Petri (2010). The growth of supportive relationships within a team along with promoting an 'esprit de corps' among staff has been cited as being among the consequences of collaboration (Henneman, Lee and Cohen, 1995). This growth in collegiality is viewed as promoting productivity as well as improving patient outcomes. Petri (2010) however is more definite in identifying consequences of interdisciplinary collaboration.

Petri (2010) states that in their review of the literature the consequences of interdisciplinary collaboration are largely positive. From a patient perspective there is evidence that improvements in patient care with improvements in patient outcomes and satisfaction arise from good interdisciplinary collaboration

(Deschario-Marino, et al., 2001, Baggs, et al., 2004, Lindeke and Sieckert, 2005; and Vaziriani, et al., 2005). Improved staff productivity from reduced fragmentation of care and better communication are also found to be consequences of good collaboration between healthcare disciplines (Deschario-Marino, et al., 2001, Baggs, et al., 2004, and Vaziriani, et al., 2005). According to Petri (2010) there are also benefits for the professions and professionals from good collaboration. Improved job satisfaction has been identified by Henneman, Lee and Cohen (1995) as being a possible consequence of good interdisciplinary collaboration and Petri (2010) agrees. Involvement in decision-making about patients and patient care results in improved staff morale and confidence, along with satisfaction with role (Petri, 2010). This appears to be particularly relevant for nurses (Dechairo-Marino, et al., 2001).

Based on the literature reviewed for this concept analysis the following consequences have been identified for Nurse/Physician Collaboration:

- Good nurse/physician relations
- Improved nurse/physician morale
- Improved patient care and patient outcomes
- Reduced fragmentation of patient care
- Improved productivity with reduction in costs
- Improved nurse role satisfaction

Summary

In summary, this section of the chapter has explored some theoretical aspects of Nurse/Physician collaboration. It is clear from the definitions of this concept that it does not have the level of complexity that is found in the concept of autonomy. It is no less important than autonomy, and as will be evident later in this chapter, it is closely related to autonomy in the clinical practice of nurses. The definition adopted for this current study is the one offered by Ushiro (2009) which states that Nurse/Physician collaboration is *"...actions related to sharing information about patients, participating in decision-making concerning patient care, and providing comprehensive care to patients from a patient centred perspective".* (pg. 1499).

Two concept analyses identified from the literature (Hennemann, Lee and Cohen, 1995; and Petri, 2010) formed the basis of the concept analysis in this chapter. These concept analyses were analysed, critiqued and integrated to create an updated analysis of Nurse/Physician collaboration within the framework offered by Walker and Avant (2005). The defining attributes of Nurse/Physician collaboration identified in this chapter were based on sharing information, decision-making and responsibility for patient care between nurses and physicians. Sharing respect for knowledge, expertise and perspective between nurses and physicians and sharing power between nurses and physicians. In terms of supporting and encouraging Nurse/Physician collaboration a number of antecedents were identified. These were effective communication between nurses and physicians with an awareness of each others' roles (Hennemann, Lee and Cohen, 1995; Ushiro, 2009; and Petri, 2010). There also needs to be mutual respect and understanding between nurses and physicians (Hennemann, Lee and Cohen, 1995; Ushiro, 2009; and Petri, 2010). The role of the organisation is also identified as an antecedent to Nurse/Physician

collaboration with the need for organisational encouragement and support and shared education in the workplace between nurses and physicians (Hennemann, et al. 1995; Ushiro, 2009; and Petri, 2010).

Consequences of Nurse/Physician collaboration were identified as good nurse/physician relations, with improved morale, improved nurse role satisfaction, improved patient care and patient outcomes, improved productivity, reduction in costs through reduced fragmentation in care (Hennemann, Lee and Cohen, 1995; Deschario-Marino, et al., 2001, Baggs, et al., 2004; Vaziriani, et al., 2005; and Petri, 2010).

In section B of this chapter a review of the empirical literature relating to Nurse/Physician collaboration is presented.

Section B Empirical Literature on Nurse/Physician Collaboration

3.3 Nature of the Nurse/Physician Collaborative Relationship

Gagnon, et al. (2010) (described earlier) found that supportive relationships with colleagues are a facilitator of clinical autonomy among oncology nurses. Participants in their qualitative study identified that *"autonomy is acquired through supportive and trusting relationships"* (pg. 25) with nurse colleagues, physicians and administration. These relationships according to Gagnon et al. (2010) lead to the development and improvement of problem-solving and decision-making ability. On the other hand, Stewart, Stansfield and Tapp (2004) identified that relationships with colleagues and other members of the multidisciplinary team can be a barrier to clinical autonomy for nurses as these relationships can undermine collaboration,

confidence and involvement in decision-making. It must be noted though that Stewart, Stansfield and Tapp (2004) did find that nurses were able to exert some level of influence over the care of patients when these relationships were positive and supportive. The principal interprofessional relationship that arose in this literature was the relationship with the medical profession.

Interprofessional relationships with physicians characterised by poor communication and conflict between nurses and physicians has also been identified as having a negative impact on the clinical autonomy of nurses. Mrayyan (2004) in a study referred to earlier found that poor communication with physicians was a barrier to the autonomy of nurses. Norris and Melby (2006) in their study, also outlined earlier, identified that nursing roles which were in conflict with physicians' perspectives were a barrier to autonomy among nurses. This raises the issue of a deeper power dynamic between the professions. Plager and Conger (2007) found in their study that conflict between the medical and nursing models of care influenced the clinical autonomy of nurses. Due to the greater emphasis and value placed on the medical model, according to Plager and Conger, the clinical autonomy of nurses was being hindered. However, Hinno, et al. (2006) found that a good Nurse/Physician relationship may not necessarily overcome barriers to the clinical autonomy of nurses.

The nature of the relationship between nurses and physicians has also emerged among the findings of other studies described earlier (Mrayyan, 2004; Stewart, Stansfield and Tapp, 2004; Norris and Melby, 2006; Hinno, et al., 2006; Kramer, et al., 2007; Plager and Conger, 2007; and Cajulis and Fitzpatrick, 2007). Kramer, et al. (2007) found that physician trust, respect and support were facilitators of clinical autonomy while respondents (advanced practice nurses, n=54) to Cajulis

and Fitzpatrick's (2007) (described earlier) study indicated a perception of a high level of support from physicians for their autonomy. The issue of support is also identified by Norris and Melby (2006) (described earlier) where they found that a lack of medical support would negatively impact on the clinical autonomy of advanced practice nurses.

In terms of interdisciplinary collaborative relationships one of the participants in Norris and Melby's study (2006) stated that the conflict is a *"power thing...nurses are still seen as doctors' handmaidens...we are not valued"* (pg. 258). When considering the autonomy of nurses in terms of the wider discussion in general on autonomy the position of nursing within a wider social context of healthcare must be considered. While there is an acknowledgement that autonomy must be granted by a wider society there may be a considered subservience of nursing within that social context. This then further highlights the relevance of investigating the relationship between autonomy in the clinical practice of nurses and collaboration between nurses and physicians.

3.4 Nurses' Perceptions of Nurse/Physician Collaboration

Tschannen (2004) conducted a cross-sectional, non-experimental, retrospective study on a sample of nurses and physicians working on two surgical units at a single hospital in Midwest USA. The aim of this study was to identify if there was a relationship between nurse and physician attitudes towards the team, commitment to the organisation and their perception of collaboration. The sample consisted of 34 nurses and 12 physicians in the first unit and 37 nurses and 22 physicians at the second unit. Response rates were 71% from nurses and 56% from physicians for

the first unit and 65% nurses and 50% physicians for the second unit. Data were collected through a questionnaire consisting of the *'Organizational and Management in the Intensive Care Unit Questionnaire'*(OMICUQ) (Shortell, et al., 1991), *'Wagner's Individualism-Collectiveism Scale' (WICS)* (Wagner, 1995) and *'Organizational Commitment Questionnaire'* (OCQ) (Mowday, Porter and Steers, 1982). Tschannen reports that all instruments used in the study had displayed good reliability in previous studies with Cronbach's alpha scores of 0.82 to 0.87 for OMICUQ, 0.72 to 0.83 for WICS and 0.82 to 0.93 for OCQ. Collaboration was measured in this study through the conflict management subscale of the OMICUQ which, according to Tschannen, has had concept validity established through factor analysis by the developer of the instrument. Cronbach's alpha in Tschannen's study for this subscale was calculated (0.81) demonstrating good reliability. The subscale consisted of 4 questions to which respondents were asked to rate on a 5 point Likert scale (scoring range 1 to 5). Mean collaboration score for nurses was 2.97 (SD 0.655) and 3.16 (SD 0.328) for physicians. In this study it appears that physicians have a more positive attitude towards collaboration than nurses. Indeed, Tschannen (2004) found that there was no significant difference in attitude between physicians at either unit while there was among nurses. There are a number of limitations to this study including the sample size and the limited setting which, according to Tschannen (2004), affect the generalisability of the findings. Of interest was Tschannen's admission of the limitations of the instruments available to investigate the concepts addressed in their study.

The interprofessional relationship between nurses and physicians was investigated in a qualitative study by Martin, et al. (2005). The researchers sought to provide a qualitative assessment of those 'tensive' issues between advanced nurse

practitioners and physicians working together to provide interdisciplinary care. Martin, et al. (2005) accessed a purposive sample of 5 physicians and 8 advanced nurse practitioners serving across 40 nursing homes in a suburban setting in the USA. Data were collected through audio taped semi structured interviews lasting between 60 and 90 minutes which were subsequently transcribed. Data were divided into thematic categories through open-coding with data being analysed using the constant comparative method recommended by Glaser and Strauss. Martin, et al. (2005) found 5 categories emerge from the data as being 'tensive' issues between nurses and physicians; *'autonomy and interdependence'*, *'professional role expectations'*, *'flexible role enactment'*, *'proactive problem solving'* and *'action learning'*. Of specific relevance to this current study is the theme of *'autonomy and interdependence'*. The researchers found that there was ongoing tension between team members' interactions and relationship and their ability to act autonomously. Advanced nurse practitioner respondents in this study indicated that physicians viewed advanced nurse practitioner colleagues as *subservient* in the relationship. One of the respondents stated that physicians needed to recognise that a *"...nurse practitioner is not a handmaiden"* (pg. 327). Of this theme Martin, et al. (2005) found that there was ongoing tension between what appeared to be 'incongruent concepts'. While this is a relatively limited study in terms of setting and sample, the coding of statements was found to have an inter-rater reliability of .80. It does however support the idea that the relationship between nurses and physicians may not be perceived as being one of partnership with a notion of subservience on the part of nurses. This is summed up by one of the physician participants' responses in Martin, et al.'s (2005) study *"I am in charge, but we are a team"* (pg. 327).

The difference in the attitudes between physicians and nurses in relation to collaboration in practice is highlighted in the findings of a study by Thomson (2007). In a descriptive comparative study Thomson sought to determine if there were differences in the attitudes of both nurses and their physician colleagues towards their collaboration in a medical surgical care setting. A convenience sample of nurses (n=65) and physicians (n=37) working at a single hospital in the USA were accessed. Data were collected using the *'Jefferson Scale of Attitudes toward Physician-Nurse Collaboration'* with a demographics section included. Analysis of the data provided descriptive statistics for the demographic information provided by the participants as well as total scores for the 'Jefferson Scale of Attitudes toward Physician-Nurse Collaboration'. Thomson does not provide reliability scores for the instrument in this study but does state that the instrument had achieved 'high reliability' in other studies. Nurse respondents were predominantly female (91%) while physician respondents were predominantly male (86%). While findings in this study did not reach statistical significance, scores between nurses (52.7) and physicians (47.6) (scale range: 15 to 60; higher score indicates more positive attitude) suggest that nurses had a more positive attitude towards collaboration in practice between the two disciplines. There are a number of limitations to this study in terms of sampling and reported rigor of the instrument used. However it is difficult not to conclude that there appears to be a mismatch in attitudes between nurses and physicians in terms of collaboration in practice with an apparent 'superior/subservient' physician/nurse relationship.

In line with similar studies Sterchi (2007) found that there were differences between nurses' and physician's perceptions of Nurse/Physician collaboration. Sterchi accessed a convenience sample of nurses and physicians working within the

operating room suite at a Midwestern community hospital in the USA. The aim of the study was to improve the understanding of the Nurse/Physician relationship and collaboration in the operating room. Specifically, Sterchi (2007) examined nurses' and physicians' perceptions of collaboration and if variables such as gender, experience or nursing specialty had any effect on participants' attitudes towards collaboration. Data were collected via a self-report questionnaire consisting of the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'*. Respondents were also asked to give information on their gender, age, experience and education. Questionnaires were distributed to 72 physicians (response 90%) and to 102 nurses (response 71%). This differs from responses to similar studies where nurses' responses exceeded those by physicians (Thomson, 2007; Taylor, 2009; Jones and Fitzpartick, 2009; and Hughes and Fitzpatrick, 2010). The gender distribution between participants in this study were similar to those found in other studies with physician participants being 88% male and nurses 97% female. Total mean scores for responses to the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'* were higher for nurses (mean 54.01 (SD=4.71) than were physicians (mean 50.29 (SD=4.71). This difference was found to be statistically significant (t=127.532, df=71, p<.000). Sterchi (2007) found that as physicians gained more experience their attitude towards Nurse/Physician collaboration improved but the opposite happened with nurses. Due to the low percentage of male participants among the nursing cohort in this study Sterchi (2007) could not establish if gender had an effect on attitudes towards Nurse/Physician collaboration among nurses. However, male physician participants demonstrated statistically significant better attitudes towards Nurse/Physician collaboration than female physicians (mean 50.32 (SD=4.61), mean 50.13 (SD=5.67) (respectively) t=82,

df=56, *p*<.000). While the difference appears statistically significant Sterchi does not give an eta squared result to determine the magnitude of the difference. There are limitations to Sterchi's (2007) study in terms of sample and setting but the findings continue to echo the findings of other studies examining attitudes towards Nurse/Physician collaboration. Again, nurses appear to indicate more positive attitudes towards collaboration. Sterchi's findings differ from other studies by suggesting that gender and experience appear to have an influence on attitudes towards Nurse/Physician collaboration.

Taylor (2009) conducted a descriptive comparative study to examine the attitudes toward nurse physician collaboration between nurse anaesthetists and anaesthetists (physicians) in a southern State in the USA. A sample of registered nurse anaesthetists (n=501) and physician anaesthetists (n=353) were sent a questionnaire that comprised of a modified version of the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'* and a section seeking demographic information on participants. The reliability of the modified scale was calculated using Cronbach's alpha resulting in a score of α=.894 for the total sample. There was a 57% response rate from the nurse anaesthetist sample while there was a 19% response from the physician anaesthetists. This, according to Taylor (2009), is consistent with the responses from physicians in other similar studies examining this issue. However, Taylor (2009) conducted a power analysis to determine the sample size in each group required to achieve statistical significance in the findings from the study, these numbers (65 in each group) were achieved in this study. The sample characteristics revealed that nurse anaesthetists were predominantly female (66%) while physician anaesthetists were predominantly male (76%). Mean score for respondents of the attitudes to collaboration scale reveals that nurse anaesthetists

reported more positive attitudes towards Nurse/Physician collaboration than physician anaesthetists (mean 55.7; SD 3.0 Vs mean 43.8; SD 6.4 (range 15 to 60) respectively). Comparative analysis of findings between groups using the independent t-test revealed that there was a significant difference between nurse anaesthetists and physician anaesthetists (t= 14.6, P<.05). This study did not find a significant difference in attitudes between male and female participants from either group. These findings are consistent with the findings of other studies on Nurse/Physician collaboration indicating that nurses appear to have more positive attitudes towards Nurse/Physician collaboration than physicians. The instrument used in this study was modified by Taylor (2009) to replace the term 'nurse' with 'nurse anaesthetist' and 'physician' with 'anaesthesiologist'. The purpose of modifying the instrument was to reflect the different roles of the nurse and physician in the area of anaesthesia. Nurse anaesthetists are recognised as advanced practice nurses in the USA and it is interesting that even at this level of practice there continues to be a significant divergence between the attitudes of nurses and physicians towards collaboration.

Attitudes to Nurse/Physician collaboration between nurses and anaesthetists was also investigated by Jones and Fitzpartick (2009). The researchers conducted a descriptive study using a modified version of the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'* to gather data. Like other studies reviewed here Jones and Fitzpatrick (2009) also gathered background information on participants. The sample was accessed through sending an e-mail link to directors of anaesthetic programmes for physicians (n=8) and nurses (n=5) in the State of Texas in the USA. Postcards were also sent to anaesthetic physician faculty (n=403) and nurse anaesthetists (n=72). The reliability of the instrument

used in this study was found to be similar to other studies that have used the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'* with a Cronbach's alpha of .91 demonstrating good overall reliability. Respondents to the study consisted of 208 nurse anaesthetists and 62 physician anaesthetists. Total mean scores for nurse anaesthetists on the collaboration scale were again higher (51.8 (SD=2.7) than the physician anaesthetist scores (44.4 (SD=8.7) reflecting the difference between nurses and physicians found in other studies reviewed in this section. The difference between the disciplines was found to be significant (F=215.31; p=.001). Background factors such as gender revealed no significant difference (F=2.22; p=.14). The findings of this study reflect the findings of Taylor's (2009) in terms of nurse anaesthetists as well as the divergence in attitudes between nurses and physicians in general. While, again there appears to be a difference between nurses and physicians in terms of collaboration it is evident that nurses hold more positive attitudes.

Nurses' and physicians' attitudes toward Nurse/Physician collaboration were also investigated by Hughes and Fitzpatrick (2010) within a non-teaching acute care community hospital in the USA. Like other studies reviewed in this section, the researchers used the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'* while also collecting background information on the participants (gender, race, practice setting and experience). Questionnaires were sent to all nurses (n=241) and all physicians (n=165) working within the hospital with a response rate of 49% for nurses and 32% for physicians. Nurse respondents were predominantly female (96.9%) while the physician respondents were predominantly male (73.6%). The Cronbach's alpha for reliability of the *'Jefferson Scale of Attitudes Towards Physician-Nurse Collaboration'* in Hughes' and

Fitzpatrick's (2010) study was *r*=.75 indicating moderate reliability. However, the reliability of the instrument among nurse participants was lower (*r*=.68) than physician participants (*r*=.81). Mean scores for nurses were higher (54.14 (SD=3.38) than physicians (51.94 (SD=4.69). A t-test for difference between mean scores between groups demonstrated a significant difference with nurses displaying higher scores on the attitudes scale (*t*=2.20; *p*=.003). In investigating differences between attitudes scores and background data t-tests revealed no significant differences based on gender, experience, race or education. While there was a significant difference between nurses and physicians in terms of attitudes towards Nurse/Physician collaboration the researchers point out that overall attitudes were good for both groups. This study, despite being conducted in a single community hospital, appears to be mirroring what was found in other studies; that nurses appear to have a more positive attitude towards collaboration with physicians than physicians have towards collboration with nurses.

EL Sayed and Saleem (2011) used a translated (into Arabic) version of the *'Jefferson Scale of Attitudes toward Physician-Nurse Collaboration'* in a study on the attitudes of nurses and physicians regarding nurse physician collaboration in a medical surgical setting. The researchers accessed a sample of 97 nurses (all female) and 38 physicians (all male) working in a medical/surgical setting in Mansoura University Hospital in Egypt. While the researchers found a slightly higher score for the surgical nurse/physician participants (50.68 (SD=4.23) than the medical nurse/physician score (49.84 (SD=4.64) this difference did not reach statistical significance (t=1.0888, p<0.279). Similar to Thomson's (2007) findings above nurses indicated more positive attitudes towards collaboration than physicians (51.21 (SD=4.32) Vs 48.11 (SD=3.83), t= -3.87, p<0.00). In using the

same instrument on a culturally divergent population to the participants in Thomson's (2007) study, Sayed and Saleem (2010) demonstrate very similar scores for attitudes towards collaboration between the professions.

Nair, et al. (2012) sought to identify the frequency of collaborative behaviours between nurses and physicians in the acute care hospital setting. A convenience purposive sample of 200 nurses and 100 physicians were accessed in a 290 bed acute care hospital in the Midwest USA (response nurses=57%, physicians=37%). Data were collected via a survey using the Nurse Physician Collaboration Scale (NPCS) (Ushiro, 2009). The reliability of this instrument overall was good (Cronbach's 0.85). The gender distribution of participants within their professional groups were similar to other studies reviewed with a dominance of female participants in the nursing group (92%) and males in the physician group (72.7%). The behaviour that was most frequently reported by nurses in this study were in the Subscale *'sharing patient information'* (M=2.74; SD 0.63) while among physicians it was in the Subscale *'the relationship between nurses and physicians'* (M=2.13; SD 0.73). Nair, et al. (2012) conducted independent t-tests to identify if there were differences between the mean item scores between nurses and physicians on the subscales and the scale as a whole. They found that nurses reported lower levels of collaborative behaviours than physicians in all of the Subscales (lower score indicates lower level of collaborative behaviour). Consequently, the overall mean item score for nurses was also found to be lower than that of physician respondents (M=2.95 (SD=0.62) Vs M=2.34 (SD=0.53), t=5.11 (p<0.001). The findings of this study indicate that physicians believe that there is a greater level of collaboration between the professions in practice than their nursing counterparts and is reflective of the findings from Sterchi's (2007) study (reviewed earlier) but differ from other

studies (Thomson, 2007; Taylor, 2009; Jones and Fitzpartick, 2009; and Hughes and Fitzpatrick, 2010).

3.5 Collaboration and Autonomy in Clinical Practice

In an action research study, Dechario-Marino, et al. (2001) sought to determine if a collaborative initiative improved nurses' rating of collaboration and satisfaction with decision-making. While autonomy was not specifically measured in this study decision-making has been identified earlier as one of the defining attributes of autonomy in clinical nursing practice (Wilkinson, 1997) and therefore this study has relevance in identifying the possible relationships between autonomy in clinical practice and collaboration. The researchers in this study adapted the *'Collaboration and Satisfaction About Care Decisions'* (CSAID) instrument developed by Bagsis to focus on nurses. The content validity of the original instrument was established through a review of the literature and the use of an expert panel. Criterion validity was found to be strong (r=0.87) while the original instrument was found to have strong internal consistency (Cronbach's 0.93). Deschairo-Marino, et al. (2001) found that their adapted questionnaire demonstrated strong reliability both pre and post test (Cronbach's alpha 0.94). Data were collected from a sample of 87 nurses one month prior to undertaking an educational intervention designed to improve Nurse/Physician collaboration and again from 65 of the original sample three months following the intervention. Like many other studies on nurses participants were predominantly women (86%) with 72.4% practicing in a medical/surgical setting. Of relevance to this current study is the finding of a strong correlation between perceived Nurse/Physician collaboration and decision-making both in the

pre test and post test phases of the study (pre test $r=0.76$, $p<0.01$; post test $r=0.69$, $p<0.01$). While the generalisability of the findings of this study is limited the sample was of sufficient size to generate statistically significant findings. The strong correlation between collaboration and decision-making found in this study does provide at least some evidence that there may be a relationship between autonomy in clinical nursing practice and Nurse/Physician collaboration.

Hinno, et al. (2009) sought to examine nurses' perceptions of their autonomy, control over practice, team work and organisational support in Estonia. Using a quantitative survey cross sectional design Hinno, et al. (2009) accessed a stratified random sample of 840 nurses practicing in Estonia. The response rate was 56.9% representing 9.23% of the entire Estonian nursing population. Data were collected using a mailed survey consisting of a translated version of the Nursing Work Index-Revised (NWI-R) questionnaire and a demographics questionnaire. Reliability of the translated instrument was established (Cronbach's alpha 0.87) while there was a strong significant correlation between the subscales ($p<0.05$). Mean scores for collaboration between nurses and physicians were between 2.95 and 3.14 which indicated overall moderate correlation with autonomy mean scores at 2.73 ($SD=0.65$). This indicates that collaboration in the context of nursing practice may in fact be a positive influence on the levels of autonomy of nurses in clinical practice. What it also reveals is that collaboration does not have a negative influence on the levels of autonomy among nurses. Indeed analysis of autonomy and organisational support in this study indicated that nurses perceiving less organisational support also reported less perceived autonomy, again reinforcing the notion that autonomy is not about independence.

In a qualitative study using Lenninger's ethnonursing Gagnon et al. (2010) sought to explore oncology nurses' perception and demonstration of autonomy in practice in Canada. The researchers conducted semi structured interviews and observation of participants in practice on a sample of 15 oncology nurses. Three major themes were identified by Gagnon et al. (2010) namely *'autonomy is an unspoken opportunity in the workplace'*, *'autonomy is developed through professional and personal growth acquired over time'* and *'demonstrating autonomous behaviours is a conscious choice'*. Within the second theme *'autonomy is developed through professional and personal growth over time'* the researchers identified a pattern that they named *'autonomy is acquired through supportive and trusting relationships'*. Here participants identified that relationships with physicians, managers and other nurses were vital for ensuring autonomy. Of the managers one of the participants is quoted as stating *"if you don't have managers who strongly support nurses being autonomous, then you don't have autonomous nurses"* (pg. E25). The findings of this study alludes to the importance of the relationship between nurses and those others in healthcare who may influence the autonomy of nurses. This links with the theoretical research in acknowledging an interdependence between individuals (Neuhouser, 2011). Trusting relationships and support in the context of the participants in this study may be viewed by some as a type of subservience but what it definitely highlights is that autonomy is not about complete independence (Seago, 2006).

In a descriptive cross-sectional study Maylone, et al. (2010) sought to investigate the relationship between perceptions of collaboration and levels of autonomy in practice among nurse practitioners. They accessed a purposive convenience sample of 100 nurse practitioners attending a national conference and asked participants to

complete a questionnaire. The questionnaire consisted of a demographics section along with the *Dempster Practice Behaviours Scale* (DPBS) and the *Collaborative Practice Scale* (CPS-APN). Both the DPBS and the CPS-APN demonstrated good reliability (Cronbach's 0.90 and 0.88 respectively). The response rate was 99% with the majority of respondents being female (91%) with a mean age of 46 years (SD 8.17). Perceptions of collaboration with physicians and levels of autonomy in practice were high in this sample. CPS-APN mean scores were 83.5 (SD=14.41) (maximum score 114) while mean autonomy scores for the cohort were 123 (SD=12.7) (maximum score 150). While high scores for both of these concepts among the sample may suggest that there could be a relationship between high levels of autonomy and high levels of collaboration this relationship could not be established by the researchers with the sample. Maylone, et al. (2010) did identify that a limitation of the study was the small size of the sample used which may have affected their ability to establish a statistically significant relationship between the variables under investigation. Notwithstanding the limitations of this study the findings support the notion that collaboration and interdependent working relationships do not appear to have a negative impact on levels of autonomy among nurses. Weston (2008) supports this by identifying independence as a distinct and separate concept from autonomy in nursing practice. According to Weston (2008), working alone and without supervisory oversight relates to independence where autonomy allows for *"freedom and accountability to make decisions within practice"* (pg. 407).

The relationship between autonomy and collaboration with physicians was investigated in a study by Papathanassoglou, et al. (2012). Researchers in this study sought to explore *autonomy*, *Nurse/Physician collaboration* and *moral distress*

among intensive care nurses working in Europe. Specifically the researchers wanted to measure levels of autonomy, collaboration and moral distress among a cohort of European intensive care nurses and to establish if there were any differences between nurses from different countries. Using a descriptive correlational cross-sectional study design Papathanassoglou, et al. (2012) accessed a convenience sample of nurses attending an international critical care nursing conference in Italy. Power analysis for the instruments used in the study indicated a required sample size of 250 participants, 1197 questionnaires were returned with the majority of participants being Italian (958). To account for this obvious bias the researchers randomly selected 60 questionnaires from the Italian respondents to give a final total of 255 questionnaires used for analysis. Relevant to this review are the aspects of this study investigating autonomy and physician collaboration among the sample of nurses. Autonomy was measured using a scale developed by Varjus, et al. (2003). The scale consisted of 18 items measuring nurses' views on their independence in decision-making, right to participate in decisions, responsibility for the decisions made and the development of a knowledge base. The score range on this scale was 18-108 with a higher score indicating a higher perceived level of autonomy. Internal consistency for the scale was found to be sufficient (Cronbach's = 0.878) by the researchers. Collaboration was measured using the *'Collaboration and Satisfaction About Care Decisions Scale'* developed by Baggs, et al. (1992). This instrument consists of 10 items measuring nurses' perceptions of the level of collaboration in sharing responsibility for solving problems and making decisions with items rated on a 7 point likert scale. Possible scores on this scale range from 7 to 70 with a higher score indicating greater perceived levels of collaboration. The scale was found to have good internal

consistency (Cronbach's = 0.91). The majority of respondents were female (83.1%) with the greatest representation from Italy. Mean autonomy scores for the sample were reported as being 'greater than moderate' (mean 84.26, SD 11.7) with collaboration scores reported as being moderate (mean 47.85, SD 11.63). Bivariate analysis of the data revealed that there was a positive association between autonomy and collaboration scores among the respondents (ρ =0.319, P<.001). Of note from the correlations between demographic information and the collaboration scores was the fact that there was a positive correlation between Nurse/Physician collaboration and level of education among respondents (ρ =0.164). Papathanassoglou, et al. (2012) reported that there were no significant differences between nurses from different countries in terms of their perceived level of autonomy or Nurse/Physician collaboration. The researchers concluded that, among European intensive care nurses at least, perceived levels of autonomy are positively related to perceived levels of Nurse/Physician collaboration.

Summary

In summary, Section B of this chapter presents a review of the empirical literature on Nurse/Physician collaboration and in particular how it relates to clinical autonomy among nurses. The importance of the relationship between nurses and physicians is highlighted in a number of studies with some believing that collaboration has a positive influence on clinical autonomy among nurses (Gagnon, et al., 2010) while others found that it inhibited clinical autonomy among nurses (Stewart, Stansfield and Tapp, 2004) or, indeed, had little influence (Hinno, et al., 2006) and may not overcome any barriers to clinical autonomy among nurses. Interprofessional relationships with physicians characterised by poor communication and conflict between nurses and physicians, however, have been

identified as having a negative impact on the clinical autonomy of nurses (Mrayyan, 2004; Norris and Melby, 2006; and Plager and Conger, 2007). The importance of the nature of the relationship between nurses and physicians emerged from the findings of a number of studies (Mrayyan, 2004; Stewart, Stansfield and Tapp, 2004; Norris and Melby, 2006; Hinno, et al., 2006; Kramer, et al., 2007; Plager and Conger, 2007; and Cajulis and Fitzpatrick, 2007) and its importance on the clinical autonomy of nurses is supported.

Differences in perceptions on the strength and nature of this relationship between nurses and physicians are highlighted in a number of studies. Studies have consistently found that nurses had more positive perceptions about the nature of the Nurse/Physician relationship than had physicians (Thomson, 2007; Sterchi, 2007; Taylor, 2009; Jones and Fitzpartick, 2009; Hughes and Fitzpatrick, 2010; EL Sayed and Saleem, 2011; and Nair, et al., 2012). On balance, however, the literature reviewed in this section indicate that positive Nurse/Physician collaborative relationships have a positive influence on the level of clinical autonomy among nurses (Deschario-Marino, et al., 2001; Hinno, et al., 2009; Gagnon et al., 2010; Maylone, et al., 2010; Papathanassoglou, et al., 2012).

Overall Summary of Literature Reviewed

Chapter one of this literature review examined the theoretical literature on autonomy. While there is literature to support the notion that autonomy, at a basic level at least, means total independence and self-determination without outside influence (Maas, et al., 1975; Wade, 1999; Lawerence, 2007 and Neuhouser, 2011) there appears to be an acceptance that autonomy needs to take into account

membership of society in general and is cognisant of the needs, restrictions, social norms and acceptability and governance within that society (MacDonald, 2002; and Neuhouser, 2011). Literature from a non-healthcare perspective, for example social and educational literature, indicates that individual autonomy is predicated on individuals having control over their actions and the capacity for rational and critical thinking (MacDonald, 2002; Nickel, 2007; and Blöser, et al., 2009). While there are a number of perspectives offered in the theoretical literature, attesting to the complexity of the concept, it is apparent that the differing viewpoints on autonomy in their entirety, represent a congruent whole rather than divergent views (Dearden, 1975: Callan, 1988; Nickel, 2007; and Blöser, et al., 2009). These perspectives are closely related to the perspectives offered in healthcare and indeed nursing literature. It is clear that nursing literature is abound with many and varied definitions of autonomy (Appendix I). The theoretical perspectives on autonomy are encapsulated by Wilkinson (1999) in asserting a determination that autonomy in nursing, while it may be independent in its own sphere of practice, it is so with regard for the contextual or social nature of overall patient care. This is summed up by Weston (2008) who stated *"Clinical Autonomy is best used to describe the authority to make nursing care decisions concerning the content of clinical patient care in an interdependent practice"* (pg. 407). To create an understanding of autonomy in clinical practice or clinical autonomy in nursing the concept analysis offered by Wilkinson (1999) is appraised and updated in Chapter one. The definition offered by Dempster (1994) is adopted as the definition of clinical autonomy in nursing for this study: *"...a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate*

behaviours and sentiments related to readiness, empowerment, actualization and valuation for autonomous practice" (pg. 227)

The empirical literature on autonomy in nursing is presented in Chapter 2. The literature in this Chapter reveals that autonomy in clinical practice is relevant to nurses (Mrayyan, 2004; Stewart, Stansfield and Tapp; 2004; Skår, 2009 and Kramer, Maguire and Schmalenberg, 2006). The literature also reveals that autonomy among nurses has an effect on issues in nursing such as job satisfaction (Stamps and Piedmonte, 1986; Goodell and Coeling, 1994; Finn, 2001; Zurmehly, 2008 and Iliopoulo and While, 2010) and the retention of nurses (Hayhurst, at al., 2005; Zurmehly, 2008; Mosely and Paterson, 2008 and Brunetto, et al., 2011).

The studies reviewed revealed a number of influences on the clinical autonomy of nurses including the practice environment itself (Mrayyan, 2004; Stewart, Stansfield and Tapp, 2004; Attree, 2005; Papathanassoglou, et al., 2005; Norris and Melby, 2006; Kaplan, et al., 2006; Plager and Conger, 2007; Kramer, et al., 2007 and Hinno, et al., 2009) and being granted or given the authority for autonomy (Kramer and Schmalenberg, 2003; Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004; Attree, 2005; Norris and Melby, 2006; Kramer et al., 2007; Plager and Conger, 2007; Cajulis and Fitzpatrick, 2007 and Gagnon, et al., 2010). Professional issues such as practice scope and education have been identified as having an influence on the autonomy of nurses (Papathanassoglou, et al., 2005; Kaplan, et al., 2006; Kramer, et al., 2007; Cajulis and Fitzpatrick, 2007; Gagnon, et al., 2010) while nurses also identified the importance of having an input into decision making about patient care or 'having a say' as an important influence on their clinical autonomy (Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004 and Attree, 2005). A number of studies examined levels of clinical autonomy among nurses in general

(Papathanassoglou, et al., 2005; Kramer, et al., 2006 and Iliopoulo and While, 2010) identifying varying levels of autonomy among nurses. Studies investigating levels of clinical autonomy among advanced practice nurses specifically identified high levels among this cohort (Ulrich, Soeken and Miller, 2003; Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009 and Maylone, et al., 2010). However, there appears to be a distinct lack of research measuring clinical autonomy among emergency nurses with studies that have investigated this nursing population identifying that levels were possibly affected (negatively) by the emergency care environment itself (Browning, et al., 2007 and Adriaenssens, et al., 2010). There is evidence from the studies reviewed that the organisational context, practice setting and authority/sanction to practice have an influence on the levels of clinical autonomy among nurses (Kramer and Schmalenberg, 2003; Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004; Kaplan, et al, 2006; Kramer, at al. 2007 and Gagnon et al., 2010).

Chapter 3 presents the literature on Nurse/Physician collaboration. The theoretical literature on this concept is presented in section A of this Chapter. There is a clear understanding of Nurse/Physician collaboration in the literature without significant variation in definitions. The definition adopted for this current study is the one offered by Ushiro (2009): *"...actions related to sharing information about patients, participating in decision-making concerning patient care, and providing comprehensive care to patients from a patient centred perspective".* (pg. 1499). Similar to the approach taken to generate an understanding of clinical autonomy in Chapter 1, a concept analysis on Nurse/Physician collaboration, based on an examination, critque and integration of concept analyses published by Hennemann, Lee and Cohen (1995) and Petri (2010), is presented in section A of Chapter 3.

Using Walker and Avant's (2005) framework for concept analysis a number of defining attributes of Nurse/Physician collaboration were identified including sharing information, decision-making and responsibility for patient care between nurses and physicians, sharing respect for knowledge, expertise and perspective between nurses and physicians while also sharing power between nurses and physicians. Antecedents to Nurse/Physician collaboration were identified as, effective communication between nurses and physicians with an awareness of each others' roles (Hennemann, Lee and Cohen ,1995; Ushiro, 2009; and Petri, 2010). Mutual respect and understanding between nurses and physicians (Hennemann, Lee and Cohen, 1995; Ushiro, 2009; and Petri, 2010) was also identified as an antecedent while the need for organisational encouragement and support and shared education in the workplace between nurses and physicians was also identified (Hennemann, et al. 1995; Ushiro, 2009; and Petri, 2010). The consequences of good Nurse/Physician collaboration were identified as good Nurse/Physician relations, with improved morale, improved nurse role satisfaction, improved patient care and patient outcomes, improved productivity, reduction in costs through reduced fragmentation in care (Hennemann, Lee and Cohen, 1995; Deschario-Marino, et al., 2001, Baggs, et al., 2004; Vaziriani, et al., 2005; and Petri, 2010).

Section B of Chapter 3 presented an examination of the empirical literature on Nurse/Physician collaboration. The literature supports the notion that the autonomy of nurses in clinical practice is related to and influenced by Nurse/Physician collaboration. Collaboration with physicians appears to be one of the most important factors in determining the level of autonomy of nurses (Dechairo-Marino, et al., 2001; Hinno, et al., 2009; Gagnon et al., 2010; Maylone, et al., 2010

and Papathanassoglou, et al., 2012) in their clinical practice which appears to be related to the nature of the relationship between nurses and physicians (Mrayyan, 2004; Stewart, Stansfield and Tapp, 2004; Hinno, et al., 2006; Norris and Melby, 2006; Plager and Conger, 2007; Kramer, et al., 2007; Cajulis and Fitzpatrick, 2007; and Gagnon, et al., 2010). Collaboration has not been viewed as a inhibitor of the autonomy of nurses and is largely welcomed as a facilitator of autonomy (Hinno, et al., 2009; Gagnon et al., 2010 and Maylone, et al., 2010).

Conclusion

The concept of autonomy is no less complex in nursing as it is in the wider society. An understanding of autonomy that is cognisant of the wider healthcare and professional society and is defined and controlled by the profession itself moves away from traditional notions of complete and absolute freedom of will. While nursing as a profession continues to establish its own 'specialised body of knowledge' (Maas, Specht and Jacox, 1975) to guide its practice within a professional scope of practice based on professional standards, it will continue to define and move the boundaries of that practice. This is how nursing will respond to the calls for the enhanced role of nursing in the delivery of healthcare.

However, patient care is the 'raison d'être' for nursing and understanding how autonomy in the provision of direct patient care at the practice or clinical level is important to gauge how nursing as a profession has been responding to the challenges of healthcare provision in the context of increasing education, knowledge and devolution of responsibility. In terms of emergency nursing, it has been established that some of the skills called for in various reports (Hanley, 2003;

Reconfiguration Forum for Cork and Kerry, 2009 and DOH&C, 2011) appear to be already within the skill set of emergency nurses (McCarthy, et al., 2013). What now needs to be established is the level of autonomy among emergency nurses in their everyday clinical practice.

The principal factor influencing autonomy in nurses' practice appears to be the nature of their relationship with physicians. The major context for autonomy in clinical nursing practice appears to be the existence of a collaborative relationship between nurses and doctors. The relationship between autonomy in nursing practice and collaboration with physicians in emergency care also requires investigation. Essentially, a research study investigating these issues will inform future strategies in terms of focusing efforts to unlock the potential of nursing in the greater evolving healthcare environment.

Chapter 4 describes the design of the research study conducted to address the issues raised in the literature reviewed for this thesis. The methodological approach to this study is explicated in Chapter 4 with the findings presented in Chapter 5. Chapter 6 provides a discussion on the findings of this study in the context of the literature reviewed while conclusions and recommendations are presented in the final Chapter.

Chapter 4

Research Design

Introduction

This chapter will begin with describing the research problem identified through a review of the literature. From the research problem a number of aims and objectives have been set for the research and are detailed in this chapter. Based on meeting the objectives of the study consideration was given to overall study design, sampling, data collection and analysis as well as to the rigor of the instruments used to collect data. All of these methodological elements will be described and justified in this chapter. According to Burns and Grove (2005) the conduct of a study should be congruent with ethical principles for research from the identification of the research issue right through to the publication of the study. Ethical issues, including how ethical principles were upheld will be addressed.

4.1 Research Problem

According to Burns and Grove (2005) a research topic is usually generated from something observed by the researcher in their everyday world. An issue observed in my clinical practice is the autonomy of nurses to exercise clinical judgement and make clinical decisions in emergency departments. It is recognised that nurses could have a central role in healthcare delivery in an evolving and challenged healthcare environment (Hanley, 2003; Reconfiguration Forum for Cork and Kerry, 2009; Department of Health and Children, 2011). Among the possible remedies to the challenges of delivering emergency care proposed, is the enhancement of the

clinical skills of emergency nurses. While there continues to be calls to increase skills in terms of performing procedures among emergency nurses in Ireland (Reconfiguration Forum for Cork and Kerry, 2009) McCarthy, et al. (2013) have found that emergency nurses in Ireland have attained significantly high levels of skill and perceived competence in the performance of procedures. McCarthy, et al. (2013) demonstrated that the perceived competence of the cohort of Irish nurses in their study compared favourably with what are considered procedures at advanced practice level in the US. So why are there continued calls for nurses, and emergency nurses in particular, to take on new skills and roles when it appears that they have the competence to engage in these roles already?

The issue may be that emergency nurses, while appearing to have considerable skill and competence, may not have the autonomy to exercise these skills in the delivery of care. There is a paucity of research in relation to autonomy in the clinical practice of nurses in emergency care. Two studies identified suggest that staff nurses in emergency departments had lower levels of autonomy than nurse managers and advanced practice nurses (Browning, et al., 2007) and nurses in general settings (Adriaenssens, et al., 2010). The problem therefore may not be the lack of enhanced skills of nurses working in emergency departments in Ireland but their level of autonomy in clinical practice.

An issue that is strongly related to the level of autonomy in clinical practice among nurses is collaboration with physicians (Hinno, et al., 2009; Gagnon et al., 2010 and Maylone, et al., 2010). Collaboration as a concept is congruent with an understanding of autonomy in clinical practice that is based on interdisciplinary interdependence. In terms of investigating this related concept not only do levels need to be assessed but also the relationship between levels of autonomy in clinical

practice and nurse/physician collaboration. Among the strategies to enhance emergency nurses' involvement in the delivery of emergency department care is enhanced education. It is important, in the context of current educational delivery, to determine if education, experience or if organisational factors have any influence over the clinical autonomy of emergency nurses, as it has appeared to have done in other settings (Papathanassoglou, et al., 2005; Plager and Conger, 2007; Cajulis and Fitzpatrick, 2007). Burns and Grove (2005) believe that the investigation of research problems should have significance for the profession and to the wider society. The problem identified as the focus for this study centres around an often misunderstood (Wilkinson, 1997; Wade, 1999; McParland et al., 2000; Kramer, Maguire and Schmalenberg, 2006) and poorly investigated (Weston, 2009) concept that has the potential to enhance patient care (Institute of medicine, 2004; Shang, et al., 2012) as well as play a significant role in improving nurse retention (McCarthy, et al., 2003; Mosely and Paterson, 2008) and nurse satisfaction (Finn, 2001; Zurmehly, 2008). While emergency nurses in Ireland appear to be well educated and competent in enhanced emergency care skills (McCarthy, et al., 2013), this study may offer a new perspective on the autonomy of those emergency nurses in clinical practice in the use of these skills.

4.2 Aims of Research

The primary aim of this study was to investigate the levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses. The secondary aim was to establish if there is a relationship between these two concepts. This research study also aimed to establish if there is a relationship between clinical autonomy

and Nurse/Physician collaboration and demographic variables of age, experience and education. In addition, the relationship between clinical autonomy and Nurse/Physician Collaboration and Organisational Influences were investigated.

4.3 Hypotheses

With the clarity of having identified the specific aims of this study a number of hypotheses were proposed. Among the aims of this study was the need to investigate the relationships among a number of variables. According to Polit and Beck (2006a) a hypothesis is a prediction regarding the relationship between the variables and is usually expressed in the negative or as a 'null hypothesis'.

Based on the aims of this study the following null hypotheses are proposed:

1. *There is no relationship between the perceived level of clinical autonomy among emergency nurses and their gender.*
2. *There is no relationship between the age of emergency nurses and their perceived levels of clinical autonomy.*
3. *There is no relationship between perceived levels of clinical autonomy and levels of education among emergency nurses.*
4. *There is no relationship between perceived levels of clinical autonomy among emergency nurses and whether they have completed specific emergency nursing education.*
5. *There is no relationship between perceived levels of clinical autonomy and length of nursing experience among emergency nurses.*

6. *There is no relationship between perceived levels of clinical autonomy and length of emergency nursing experience among emergency nurses.*
7. *There is no relationship between the perceived levels of Nurse/Physician collaboration among emergency nurses and their gender.*
8. *There is no relationship between the perceived levels of Nurse/Physician collaboration among emergency nurses and their age.*
9. *There is no relationship between perceived levels of Nurse/Physician collaboration and level of education among emergency nurses.*
10. *There is no relationship between perceived levels of Nurse/Physician collaboration among emergency nurses and whether they have completed specific emergency nursing education.*
11. *There is no relationship between perceived levels of Nurse/Physician collaboration and length of nursing experience among emergency nurses.*
12. *There is no relationship between perceived levels of clinical autonomy and perceived levels of Nurse/Physician collaboration among emergency nurses.*
13. *There is no relationship between perceived levels of clinical Autonomy and organisational influences on nursing practice among emergency nurses.*
14. *There is no relationship between perceived levels of Nurse/Physician collaboration and the perceived level of organisational influence among emergency nurses.*

4.4 Research Design

This following section describes how the study was conducted and provides a rationale for the decisions made regarding the methods used to collect and analyse

data. The aim of this research was to measure the perceived levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses. This was served best by a quantitative descriptive approach. However the remaining objectives of this study focus on investigating relationships between the central concepts and a number of other variables. The relationships between the variables under investigation are illustrated in the study's conceptual framework (Appendix II). This framework predicts that clinical autonomy and Nurse/Physician collaboration influence each other while gender, education, experience, and organisational issues influence (but are not influenced by) clinical autonomy and Nurse/Physician collaboration.

Congruent with the overall aims of this study, therefore, a descriptive correlational design was employed.

4.5 Conceptual and Operational Definitions

According to Burns and Grove (2005) the variables under investigation in a study need to be not only conceptually defined but also operationally defined. In terms of the current study there are a number of variables under investigation namely, the independent variables of Nurse/Physician collaboration, organisational influences, gender, age, experience and education and the dependent variable of clinical autonomy. Through providing conceptual and then operational definitions for these variables a strategy to gather data to investigate them and their relationship was developed.

Clinical Autonomy

The conceptual definition of clinical autonomy adopted for this study is the definition offered by Dempster (1994) who defines autonomy in nursing practice as *"a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviours and sentiments related to readiness, empowerment, actualization and valuation for autonomous practice"* (pg. 227).

Operationally, clinical autonomy is defined as the total score achieved by a participant on the *'Dempster Practice Behaviours Scale'* (DPBS) (Dempster, 1990). The DPBS is a 30 item instrument that assesses a participant's behaviours, actions and conduct in terms of their autonomy in clinical nursing practice. Scores on this scale range from a low of 30 to a high of 150. A higher score indicates a higher level of Clinical Autonomy among participants.

Nurse/Physician Collaboration

The conceptual definition of Nurse/Physician collaboration adopted for this study is the one offered by Ushiro (2009) *"...actions related to sharing information about patients, participating in decision-making concerning patient care, and providing comprehensive care to patients from a patient centred perspective".* (pg. 1499).

Operationally, Nurse/Physician collaboration is defined by participant's total score on the 'Nurse/Physician Collaboration Scale' (NPCS) (Ushiro, 2009). Total scores on this scale range from a low of 27 to a high of 135. Interpretation of scores on this scale is the opposite to interpretation of scores on the DPBS. A low score on the NPCS indicates a higher level of Nurse/Physician collaboration while a high score indicates lower levels of Nurse/Physician collaboration.

Experience – As a Registered Nurse

Experience as a registered nurse, in this study, is defined as the length of time spent working as a registered nurse from the time of qualification.

This variable is operationalised through the measurement of this time in terms of years and months. Participants were asked to indicate their length of experience in an open-ended question allowing them to indicate in years and months their length of experience.

Experience – As an Emergency Nurse

Experience as an emergency nurse, in this study, is defined as the length of time spent working as an emergency nurse.

This variable is operationalised through the measurement of this time in terms of years and months. Participants were asked to indicate their length of experience as an emergency nurse in an open-ended question allowing them to indicate in years and months their length of emergency nursing experience.

Education

Education is defined as the qualifications obtained both in terms of professional qualifications and academic qualifications.

This variable is operationalised through the identification of qualifications obtained. Respondents were asked to identify both their professional and academic qualifications.

Professional qualifications have been categorised by what division on the nurses register participants hold registration. These divisions are identified as Registered

General Nurse, Registered Midwife, Registered Children's' Nurse, Registered Psychiatric Nurse, Registered Intellectual Disability Nurse, Registered Nurse Prescriber. The category of Registered Advanced Nurse Practitioner has been excluded as advanced nurse practitioners were excluded from participation in this study.

Academic qualifications were operationalised in this study by indicating what academic qualifications participants had achieved. These qualifications ranged from certificate level education to PhD/Doctoral degree level. As the current study aims to investigate the qualifications held by emergency nurses then a specific focus on emergency nursing qualifications was included to investigate the relationship of this independent variable and clinical autonomy. To this end participants were asked if they had achieved a specialist emergency nursing qualification.

Organisational Influences

This variable is defined as those factors that are controlled outside the influence of the nurse and provide the context in which they work. The literature reviewed indicated that there are a number of influences on the autonomy of nurses in clinical practice. These include issues such as organisational sanction and authority, nurses having a say in patient care and trusting and supportive relationships within the organisation. A new scale (Organisational Influences on Nursing Scale) was developed for this study based on the literature reviewed and was used as a measure of the organisational influences on the clinical practice of nurses. Scores on this scale range from a low of 8 to a high of 40. A higher score

reflects a more positive perception of the influence of the organisation in which nurses work on their nursing practice.

4.6 Sample

The target population were staff nurses working in Emergency Departments in the Republic of Ireland. This has been estimated at approximately 880 nurses (Comhairle na nOispideal, 2002) and from a practical viewpoint were not accessible for the purposes of this research. Therefore an accessible population, working within a region of the Republic of Ireland was accessed. An important step in the research process, according to Zodpey (2004), is accessing a sufficient sample in order to generate statistically significant findings. A statistician was consulted and assisted with the identification of a sufficient sample size to generate statistically sufficient findings for this study.

Sample size justification:

Correlational analysis was used to investigate the effect of nurse characteristics and Nurse/Physician collaboration on clinical autonomy of nurses. For a correlational analysis, a sample size of 84 is required to detect a medium correlation (Cohen's r = 0.3) between collaboration and nurse autonomy, with a power of 80%, a level of significance of 0.05 and a 2-tailed test. For a regression analysis, a sample size of 98 nurses were sufficient to detect a medium effect (f^2=0.15) in a multiple linear regression with up to 6 independent variables, with a power of 80% a level of significance of 0.05 and a 2-tailed test. Therefore, the sample size for this study

was rounded up to 100 nurses. The sample size calculation was performed using the G-Power 3.1 program.

Therefore, a non-randomised sample of 141 emergency nurses working in four emergency departments in a region of the Republic of Ireland were recruited to participate. According to Haber (2002) a sample needs to be defined in order to increase the confidence in the findings generated. A number of inclusion and exclusion criteria were decided upon to provide data on a relatively homogenous group i.e. staff nurses working in Emergency Departments in the Republic of Ireland. Participants from all sizes of Emergency Department were viewed as important to inform the aims of this study and were included. Below is a list of the inclusion and exclusion criteria for participation in the study.

Inclusion Criteria

- Registered nurses
- Employed in emergency departments
- Staff nurse grade

Exclusion Criteria

- Undergraduate student nurses
- Advanced Nurse Practitioners
- Clinical Nurse Managers
- Agency or relief nurses

Sample Context – Emergency Departments

While four Emergency Departments (ED) were identified from which to draw the sample 3 were accessed (see section 4.10). The first department was a large tertiary referral ED serving a large region in the South of Ireland with approximately 62,000 attendances per year. This is a mixed department with both adults and children attending for care. The second department accessed was a city centre ED in the South of Ireland. This unit is open 24 hours per day 7 days per week with approximately 25,000 patients attending for care every year. This ED does not receive major trauma patients but is also a mixed department caring for both adults and children. The final ED accessed is situated in excess of 100km from the next nearest ED with approximately 35,000 patients attending this department for care each year. All ED accessed have links with local third level educational institutions in terms of medical and nursing education.

4.7 Data Collection

An objective and systematic approach to data collection is highlighted by Sullivan-Bolyai and Grey (2002). In terms of the current study data were collected using a self-reported questionnaire (appendix III). This according to Polit and Beck (2006a) allows for the collection of data relating to the "...prevalence, distribution and interrelationships of variables..." (pg. 186) within a given sample or population. The dependent and independent variables have been already conceptually and operationally defined in this chapter. In terms of collecting data about each variable operational definitions aid in identifying appropriate measures for the data being sought.

This section of the chapter will describe the instruments used to collect data (Appendix III) along with a rationale for selecting the instruments. This section will also describe how the data were collected.

Demographic Information

The first section of the questionnaire was designed to provide demographic information. Participants were asked for responses to six questions. The first question asked respondents to indicate their gender. Participants are then asked to indicate their age in years. Participants were also asked to indicate what registrations they hold and were offered a choice of six registers to choose from: General Nursing (RGN), Midwifery (RM), Psychiatric Nursing (RPN), Intellectual Disability Nursing (RNID), Nurse Prescriber (RNP) and Children's Nursing (RCN). Question four addresses the education of participants asking participants to indicate what qualifications they had obtained from certificate level to PhD/Doctoral level qualifications. Participants were also asked to indicate if they had obtained a speciality emergency nursing qualification. The length of participants' experience was measured on two levels. Firstly, their overall length of nursing experience from qualification is addressed in question six while participants were also asked to indicate their length of emergency nursing experience. To both of these questions participants were asked to indicate their experience in years.

Clinical Autonomy in Nursing

Measurement of autonomy in clinical practice has been a challenging issue for researchers. Wilkinson (1997) suggests that measurement of the concept could follow techniques that have measured job satisfaction or recruitment and retention

as these have been linked with autonomy in practice. Weston (2009), however, offers an analysis and critique of some of the instruments developed to measure autonomy in nursing.

Weston (2009) conducted a review of the psychometric properties of instruments developed to measure autonomy and control over practice in nursing published in peer reviewed journals between 1990 and 2007. Weston found the understanding and definition of autonomy in nursing literature to be inconsistent and confused. This, according to Weston, has led to incorrect or imprecise measures used to measure autonomy in nursing. In terms of clinical autonomy Weston suggests that a number of instruments have been used inappropriately. She identifies three instruments, developed to measure patient autonomy, that have been used in research to measure nurse autonomy; 'Autonomy: the Caring Perspective' (Boughn, 1995), 'Nurse Autonomy and Patient rights Questionnaire' (Pankratz and Pankratz, 1974) and the 'Job Characteristics Inventory' (Sims, Szilagyi and Keller, 1976). These have, according to Weston, been used inappropriately to measure autonomy in nursing.

According to Weston (2009) the instruments measure concepts that do not specifically measure clinical autonomy:

- *Autonomy the Caring Perspective*: Measures attitudes towards patient autonomy
- *Nurse Autonomy and Patient Rights Questionnaire*: Measures nurse and patient autonomy where autonomy means individual independent functioning

- *Job Characteristics Inventory*: Measures autonomy where autonomy means the extent to which people have a say in their work environment.

One instrument and measure of autonomy that appears to have been ommitted from Weston's analysis is the *Dempster Practice Behaviours* Scale (DPBS) (Dempster, 1990). According to Dempster (1990) the instrument seeks to focus on "overt and covert behaviours, actions and conduct related to the extent of an individual's autonomy in a practice setting" (pg. 1). The DPBS is a 30-item instrument. Participants are asked to rate their response to each of the 30 items on a 5 point likert (from 'not at all true' to 'extremely true') scale giving a possible range of scores from 30 to 150. The higher the score the higher the level of autonomy in practice. Dempster states that the word autonomy has not been used in the title of the instrument to prevent response bias and this may be why the instrument may not have been identified for inclusion by Weston (2009). Clearly this instrument measures clinical autonomy as it focuses on the extent of autonomous behaviours of nurses in practice and was developed by Dempster in response to the lack of instruments that measure autonomy in clinical practice. This 30 item self administered questionnaire has 4 subscales identified from the research that informed the instrument development namely, *readiness, empowerment, actualisation* and *valuation*. While this instrument is seen as theoretically multidimensional Dempster found it to be empirically unidimensional i.e. while the reliability score for the instrument as a whole was found to be good, the reliability scores for the subscales were not (as discussed later in section 4.7.1).

Huber, et al. (2000) evaluated the DPBS as part of an evaluation of available instruments to measure effectiveness of management innovations in relation to important areas of nursing and found the DPBS was the only instrument judged to

have achieved a maximum score of 5 for psychometric soundness. In terms of ease of use the DPBS scored three out of five, exceeding what Huber, et al. (2000) determined as a satisfactory score of two out of five.

Permission to use the DPBS in this study was obtained from Dr. Dempster (appendix IV).

Nurse/Physician Collaboration

Nurse/Physician collaboration was measured using the 'Nurse/Physician Collaboration Scale' (NPCS) developed by Ushiro (2009). This scale, according to Ushiro, is based on the work of a number of theorists who focused on information management processes used to solve problems. Ushiro states that the "...concept of collaboration assumes the following three constructs: sharing of patient information, joint-participation in the decision-making process, and cooperativeness" (pg. 1499). The scale has 27 items divided into 3 sections that ask participants about sharing patient information, decision-making process on the cure/care and the relationship between nurse and physician.

According to Ushiro the NPCS was developed using a 'step by step' process. The items were initially designed based on a review of the literature, observation of interactions between nurses and physicians and interviews with nurses (n=7) and physicians (n=9). Items were initially categorised into nine categories of items namely:

1. Sharing information concerning the patient's condition
2. Mutual understanding of the patient's feeling
3. Joint participation in planning

4. Common objectives
5. Joint resolution of problems
6. Trust and respect
7. Awareness of role and responsibility
8. Mutual support
9. Open communication

A review of the interview responses led Ushiro to re categorise these items into three constructs *'sharing of patient information'*, '*joint participation in the cure/care decision making* process' and *'degree of cooperation'* with a scale of 69 items. The refinement phase of the instrument development involved reducing the scale to 27 items.

Participants are asked to rate their responses to each statement on a 5 point likert scale (from always to never). A lower score indicates a higher level of Nurse/Physician collaborative behaviours. Score ranges for the scale in total are 27 to 135 with ranges for the individual subscales 'sharing patient information', 9 to 45, 'decision-making process on cure/care', 12-60 and 'the relationship between nurse and physician', 6-30.

Permission to use the scale in this study was obtained from Dr. Ushiro (appendix V).

Organisational Influences in Nursing Scale

A number of existing scales were reviewed to identify one that measured organisational influences on nurses. The 'Alberta Context Tool' (Estabrooks, 2009)

and the ‘Work Environment Scale of the Nursing Work Index’ (WES –NWI) (Lake, 2002) are among instruments that examine the influence of the organisation on nursing practice. However, they appear not to reflect the issues raised in the literature reviewed earlier in relation to the autonomy of nurses in practice. Based on the findings, mainly from the qualitative research reviewed, a new proposed scale was developed, the ‘Organisational Influences in Nursing Scale’ consisting of 8 items. This scale measures the organisational influences on nursing practice and whether these influences are perceived as positive or negative.

In order to generate items for the new scale all findings relating to organisational issues were extracted from the literature and synthesised into 7 items initially by the researcher. This according to Beck (1999) is a method commonly used by nurse researchers to generate items for quantitative instruments. A review of the items by the supervisor of this study identified an additional item that was missed through the initial review and the 8 items were confirmed by the co-supervisor of this study. The wording of the items was reviewed by an expert panel of 8 nurses to enhance the clarity for respondents. Respondents were asked to indicate the frequency of each of the items on a 5 point likert scale from ‘always’ to ‘never’. Content validity of the instrument was assessed (reported later) and the final version of the instrument was administered to respondents (Appendix III).

4.7.1 Instrument Reliability and Validity

Dempster Practice Behaviours Scale (DPBS)

The content validity of the DPBS was assessed through 'Content Validity Index' (CVI) of the initial 40 item DPBS by Dempster. This score was calculated from ratings of seven content experts. The maximum CVI score achievable is 1.00, this was achieved by the DPBS according to Dempster (1990). The initial 40 item instrument was assessed for convergent and discriminant validity by Dempster through distribution of the instrument along with 3 existing instruments measuring autonomy to a sample of 1,000 nurses practicing in the USA. Five hundred and sixty nine useable responses resulted in the instrument being reduced to 30 items through exploratory and confirmatory factor analysis including principal components factoring with orthogonal varimax rotation and alpha factoring. Construct validity of the DPBS was established through construction of a multitrait-multimethod (MTMM) matrix where convergent validity of the DPBS was demonstrated with other autonomy tools of differing measurement methods and traits (Dempster, 1990).

The reliability of the DPBS has been reported as strong in a number of studies . The reliability of the instrument as a whole is excellent with a Cronbach's α=.95 (Dempster, 1990). This is supported by studies that have used this instrument (Ulrich, Soeken and Miller, 2003 (α =0.94); Cajulis and Fitzpatrick, 2007 (α =0.92); Bahadori and Fitzpatrick, 2009 (α =0.79) and Maylone, et al., 2010 (α =0.95)). The reliability of the DPBS was also assessed as part of this study. The DPBS was also found to have good reliability in this study with a Cronbach's alpha of 0.86.

Nurse/Physician Collaboration Scale (NPCS)

The reliability of the NPCS was assessed using Cronbach's alpha coefficients and test-retest reliability co-efficients by Ushiro (2009) on a sample of 1584 nurses (response = 78.7%) and 843 physicians (response = 54.4%) working in 27 hospitals in a large city in Japan. Responses from each group i.e. nurses and physicians were assessed for internal consistency. The Cronbach's alpha co-efficient for the subscale *'sharing of patient information'* was 0.905, for the subscale *'joint participation in the cure/care decision-making process'* was 0.923 and for the subscale *'cooperativeness'* was 0.800 among the nursing sample (Ushiro, 2009). Ushiro also found that item-total correlation values to be high ranging from 0.423 to 0.787 among the sample of nurses. Similar calculations were performed for the responses from physicians with similar high Cronbach's alpha co-efficients found (0.911 for *'sharing of patient information'*, 0.926 for *'joint participation in the cure/care decision-making process'* and 0.842 for *'cooperativeness'*). Also, similar to the total item correlation values found for the nursing sample these values were also found to be high among the physician group (0.502 to 0.801). A similarly high reliability was found by Nair, et al. (2011) who used the NPCS in their study in an acute care hospital setting among nurses and physicians in the USA. They found that the Cronbach's α for the subscales was high with the Cronbach's α for the scale overall being 0.85. In Nair, et al's study (2011) both the subscales and the scale overall was found to have good reliability. Cronbach's α for each of the subscales in this study were good (*about sharing patient information*: α =0.82; *about decision-making process on the cure/care*: α =0.90; *about the relationship between nurse and physician*: α =0.83) with the scale overall demonstrating excellent reliability with a Cronbach's α of .92.

The reliability of the NPCS was assessed for this study. The instrument demonstrated good reliability for both the individual subscales and the scale overall. The Cronbach's alpha calculated for each of the subscales were as follows: *about sharing patient information* 0.816, *about decision-making process on the cure/care* 0.895, and, *about the relationship between nurse and physician* 0.828. The Cronbach's alpha for the NPCS overall in this study was 0.918. These reliability scores are largely consistent with previous studies and demonstrates the reliability of this instrument in measuring Nurse/Physician collaboration among a population of nurses working in Ireland.

Stability of the NPCS was assessed using a test-retest method by Ushiro where 90 nurses and 58 physicians were asked to complete the instrument a second time at an interval of 2 to 3 weeks. Test retest correlation coefficients for nurses and physicians for each of the subscales were 0.710 and 0.624 ($p<0.01$) for *'sharing patient information',* 0.658 and 0.798 ($p<0.01$) for *'joint participation in the cure/care decision-making process'* and 0.676 and 0.774 ($p<0.01$) for *'coooperativeness'* respectively.

Construct validity for the NPCS was confirmed by Ushiro by exploratory factor analysis followed by confirmatory factor analysis. Convergent validity was assessed through correlations with responses of the sample to the *'Team Characteristic Scale'* (developed by the Japan Institute of Labour (2003) to assess if team members share knowledge and information (Ushiro, 2009). Ushiro found statistically significant positive correlations between responses to both the 'Team Characteristics Scale' and the NPCS among nurses ($r=0.360-0.523$, $p<0.001$) and physicians ($r=0.435-0.639$, $p<0.01$). Concurrent validity was assessed through investigating the relationship between the NPCS and the 'Intergroup Conflict

Scale'. Ushiro found that there were statistically significant negative correlations between the scales for both nurses ($r=-0.20$ to -0.236, $p<0.01$) and physicians ($r= -0.165$ to -0.152), although the correlations were smaller among physicians.

Organisational Influences in Nursing Scale

According to DeVon, et al. (2007) confirming the validity and reliability of research tools is a "...prerequisite for assuring the integrity of study findings" (pg. 155). The scale used to measure the influence of the organisation on the clinical autonomy and Nurse/Physician collaboration of nurses is a new scale developed for this study. Based on the generation of the scale items from published research and initial review by two experts (supervisors of current study) face validity can be assumed for the instrument. According to Polit and Beck (2006a) this is the weakest form of validity assessment for an instrument. However, it serves as a useful starting point in establishing the validity of the instrument introduced in this study. According to Beck (1999) the first type of validity that should be established for any new instrument is 'content validity'. As the Organisational Influences on Nursing Scale is proposed as a new scale the instrument's content validity was established and is described next.

Content Validity

One method used to establish the content validity of an instrument is through assessing the content validity index (CVI) of the instrument. This is a measure of the level of agreement between experts in relation to the relevance of the items to the concept being measured (Polit and Beck, 2006). Content validity, according to Polit and Beck (2006b) "...concerns the degree to which a sample of items, taken together, constitutes an adequate operational definition of a construct" (pg. 490).

The draft instrument, containing 8 items (Appendix VI) was given to a panel of 8 nurses from differing clinical areas. One of the panel was a clinical nurse specialist with a Masters degree, 2 were clinical managers, 1 of whom also had a Masters degree while the other had a Postgraduate Diploma in their specialist area. Another of the panel was a clinical facilitator who had achieved Masters degree level education and was involved both at a clinical and managerial level within the organisation. The remaining 4 panel members were staff nurses. Two were staff nurses with in excess of 10 years nursing experience, one of whom had a Masters degree and the other a Bachelors Degree. The remaining 2 panel members were staff nurses with less than 10 years nursing experience neither of whom had postgraduate qualifications. The panel members came from ED, Intensive Care, Children's, Older Adult and general medical and surgical practice areas. The panel was chosen as it represented a varied cross-section of nurses who experienced the influence of the organisation in which they worked on their practice from differing perspectives, positions and levels of insight. According to Polit and Beck (2006b) a minimum of 5 panel members should be chosen where Lynn (1986) suggests that less than 10 members is sufficient. The panel were given a reviewer form that asked them to rate the 'Clarity', 'Relevance' and 'Consistency' of the items in the proposed instrument. Following a brief introduction to the study and instructions on how to conduct the review (Appendix VI) expert panel members were asked to complete the reviewer form. In terms of 'Clarity' experts were asked to indicate if they thought that the item was clear or unclear. The relevance of the item was rated as 'not relevant', 'somewhat relevant', 'quite relevant' or 'very relevant'. The responses were scored 1 for 'not relevant', 2 for 'somewhat relevant', 3 for 'quite relevant' and 4 for 'very relevant'. Finally experts were asked to indicate if they

thought that the items all measured the same thing – organisational influences in nursing clinical autonomy. This approach to establishing the content validity of an instrument follows the recommendations of Lynn (1986). Lynn (1986) recommends that relevance responses are dichotomised to *not relevant* (including responses indicating 'not relevant' and 'somewhat relevant') and *relevant* (including responses indicating 'quite relevant' and 'very relevant'). Items that were scored 3 or 4 (quite relevant and very relevant) by the panel were rated as content valid.

The table in Appendix (VII) indicates expert responses in terms of relevance of each individual item. According to Polit and Beck, there are a number of means of expressing and calculating the CVI of an instrument. Firstly there is the item CVI, which they suggest should be expressed as 'I-CVI'. The I-CVI indicates the relevance of each individual item of an instrument. The purpose of this rating is to aid in instrument refinement and to remove items that are not agreed to be relevant by an acceptable proportion of expert judges (Lynn, 1986). Lynn (1986) advocates that the I-CVI should not be less than 1.00 for panels of 5 or less experts but could be relaxed to 0.78 for panels greater than 5. As can be seen from the table in Appendix VII, on the basis of 8 experts all but one item achieved an I-CVI of 1.00. Item number 4 was rated as not relevant by one expert giving an I-CVI of 0.86. It must be noted that one of the panel did not give a relevance judgement on item 4. This expert also indicated that they felt this item was unclear and may be why they did not give a judgement. On this basis, the I-CVI for item 4 (0.86) is based on 7 experts. These scores indicate a strong content validity for each individual item on the scale.

The second means of expressing the CVI of an instrument is through calculation of the scale CVI or 'S-CVI'. The S-CVI is the content validity of the scale as a whole and can be expressed and calculated by a number of means (Polit and Beck, 2006). For this study S-CVI is expressed as an average of the average proportion of the items rated as relevant by each of the experts. Polit and Beck (2006b) state that there are 3 means of generating this calculation but that all means generate the same answer. For this instrument the I-CVI scores were added together and divided by the number of items on the scale. The S-CVI generated for this new scale is 0.98, above the 0.78 recommended by Lynn (1986). This indicates that the instrument has excellent content validity.

The panel all indicated that the instrument was consistent in measuring the concept under investigation (Appendix VII). However, a number of the panel members questioned the clarity of some of the items. Three of the panel questioned the meaning of the term 'nursing practice' in item 1 and item 4. Two of the panel asked if the term meant 'actual nursing practice'. These items were revised and the word 'clinical' was added to clarify this term for respondents. Two of the panel questioned the clarity of items 6 and 8 on the instrument. However, their comments seem to support the inclusion of the items by stating that these items depended on the team in which the nurse worked. These items were left unchanged (Appendix III).

Reliability

According to DeVon, et al. (2007) reliability relates to the ability of any instrument to measure the issue under investigation on a consistent basis. Cronbach's alpha coefficient for the instrument was measured following data collection. According

to DeVon, et al. (2007) this is the most commonly used statistical measure used in nursing research to demonstrate the internal consistency of an instrument. The Organisational Influence on Nursing Scale was found to have good internal consistency with a Cronbach's alpha of 0.797, above the 0.70 advocated as acceptable in nursing research (Polit and Beck, 2006). The reliability testing of the instrument is further described in the next Chapter which addresses the findings generated from the data gathered for the study.

4.8 Pilot Study

In order to identify any issues in relation to the design of this study before data collection a pilot study was conducted. According to Polit and Beck (2006a) a pilot study is useful in identifying unforeseen problems with a study and is part of the design and planning phase.

A pilot of the study was conducted with a sample of staff nurses working in an Acute Medical and Acute Medical Assessment Unit at one hospital. The work of these units are viewed as similar to that in Emergency Departments (ED) with patients being referred to these units either from the ED or the patient's own general practitioner (instead of being referred to the ED). Twenty two nurses were recruited and agreed to participate in the pilot study. Participants were personally handed a copy of the questionnaire by the researcher and the purpose of the pilot study was explained to them. They were asked to complete the questionnaire and to reflect on the clarity of the information and instructions that were provided to complete the questionnaire. Participants in the pilot were asked to reflect on how the instruments used in the study looked in terms of readability, clarity of

questions, visual quality of the instrument and time taken to complete the study. Participants were asked if the instrument was overly burdensome for participants and if the use of an alternative paper colour (pink) was appropriate and helpful. The pilot study was conducted over one week and of the 22 questionnaires distributed 16 were returned. Participants were largely positive about the questionnaire and the instructions given to complete the questionnaire. Each instrument was printed on individual pages with no questions from one instrument appearing on a page with questions from another instrument. Participants stated that seeing the 2 page information/ instruction sheet followed by 4 individual pages of instruments was a little daunting at the beginning but that they found completion of the questionnaire quite straight forward. Of particular interest was participants' reaction to the new scale proposed for the study, the Organisational Influence on Nursing Scale. Participants indicated that they found the instrument easy to complete and easy to understand. A small number of participants also indicated that they found the negatively worded questions on the instrument made them think about their answers to the questions posed. There was agreement among participants that using an alternative coloured paper, in this case pink, was useful and they felt that it was novel to complete a questionnaire that was not on white paper. Most participants indicated that they completed the questionnaire in approximately 10 minutes with a small number indicating that it took them approximately 15 minutes to complete the questionnaire. An examination of the completed questionnaires revealed that there were no missing data among the responses with all questions completed by all participants

Based on the information gained from the pilot study all items on the questionnaire remained. In terms of responding to the daunting nature of receiving 6 sheets of

paper as part of the questionnaire packet the information/instruction sheet was printed double sided on a single white sheet of paper while the questionnaire was printed double sided on 2 sheets of pink paper.

4.9 Procedure

Data were collected by means of a self report questionnaire comprising of four sections (appendix III). Having obtained ethical approval from the Cork Teaching Hospital Research Ethics Board (Appendix VIII) permission to access the sample was obtained from the relevant institutional/hospital gatekeepers (Appendix IX). Questionnaires were distributed to each of the participant Emergency Departments by the researcher in person and an identified contact person at each unit was asked to help with distribution and collection of questionnaires. Posters (Appendix X) were placed on each unit advertising the study and any local electronic means of communication (e.g. staff e-mail) were used to encourage responses. For example, one of the units have an e-mail messaging system as part of their electronic off-duty requesting and recording system. Participants were sent a message on this system informing them of the study and asking them to participate.

Participants were given a packet containing an information leaflet inviting them to participate in the study with instructions on how to complete the questionnaire (Appendix XI) and a copy of the questionnaire (Appendix III). A collection box was placed in each individual unit as opposed to asking participants to post responses in the mail as postal questionnaires have been known to generate low response rates (Polit and Beck, 2006).

The researcher communicated with the individual unit links on a twice weekly basis to monitor responses and to encourage recruitment of participants.

4.10 Access

Access to the study sites was sought through written and verbal communication with the Directors of Nursing and the senior Clinical Nurse Managers at the individual sites. Letters to these gate-keepers (Appendix IX) advised them of the purpose of the study, method of data collection and ethical approval for the study. In one of the hospitals a meeting with the Director of Nursing was required to achieve approval to conduct the study. There was also a requirement at this hospital that the study be registered with their Clinical Governance Office which was also completed prior to accessing the sample at that hospital. At another of the participant sites access was granted by the hospital's Board of Management. The request to access staff nurses at the ED in that hospital was brought by the Director of Nursing to the Board of Management on behalf of the researcher and the decision of the Board was communicated by the Director of Nursing back to the researcher. This hospital placed a number of conditions on access relating to confidentiality of the data from the institution and an agreement to provide the hospital with a copy of the findings following completion of the study. Another of the participant sites required that the Emergency Department Governance Committee give permission for the study, this was also granted and communicated by the Assistant Director of Nursing for the Unit.

Access to the final site for the study was granted by the Director of Nursing contingent on the area Ethics Committee being satisfied with the approval already

granted to the study. The Ethics Committee required a separate Ethical Approval application for the study to be conducted at the hospital. This took a number of weeks to complete and delayed possible access to the sample at the hospital. Subsequent to achieving ethical approval to conduct the study at the site advice from the hospital was to delay data collection because of local issues/conditions at the unit. Data collected from the other 3 study sites had at this stage yielded the desired 100 responses. For pragmatic reasons, and because a sufficient response was achieved from the other sites, it was decided, for the purposes of the current study, not to pursue data collection at this site.

4.11 Data Analysis

The data gathered in this study were transferred to the computerised statistical package IBM SPSS V20 for data storage and analysis. A codebook was generated to reflect coding of items on the questionnaire (Appendix XII).

The first section of the questionnaire collected data relating to the personal characteristics of participants. Information regarding gender, age, registrations held, academic qualifications, specialist emergency nursing qualifications, length of nursing and specifically emergency nursing experience. Data collected on length of nursing experience and emergency nursing experience included data in years and months. This data was converted to years with the month quantities becoming a proportion of a year e.g. 5 years and 3 months became 5.25 years. The merging of years and months quantities for each respondent became new variables on the IBM SPSS V20 file for length of nursing experience and length of emergency nursing experience. The data for this section of the questionnaire were analysed with

descriptive information about the sample generated. Data on levels of academic qualifications of participants were further recoded where the highest level of qualification of participants were identified with these dichotomised into undergraduate level (up to and including Degree level) and postgraduate (Postgraduate Diploma, Masters Degree). This new variable was used in the analysis to compare the differences between those with undergraduate level education and those with postgraduate level education in terms of their responses to the instruments measuring the dependent variables (clinical autonomy and Nurse/Physician collaboration).

Perceived levels of clinical autonomy among emergency staff nurse participants in this study were measured using the DPBS (Dempster, 1990). There are 5 possible responses to the items on this scale and these were scored fron 1= 'not true at all' to 5= 'extremely true'. Five of the items on this scale are reverse scored (items 8, 13,17, 26 and 28) and these items were recoded post data entry. The reliability of the instrument was assessed through calculating Cronbach's alpha for the data. Descriptive statistics for responses to this instrument were generated with mean score and standard deviation for responses presented in Chapter 5. The data from the DPBS were also presented graphically.

Perceived levels of Nurse/Physician collaboration among emergency nurses were measured using the NPCS (Ushiro, 2009). This 27-item instrument has 3 subscales namely 'about sharing patient information' (9 items), 'about decision-making process on the cure care' (12 items) and 'about the relationship between nurse and physician' (6 items). None of the items on this instrument are reverse scored. The reliability of the instrument was assessed as was the reliability of the individual

subscales of the NPCS. Total mean scores for the instrument were generated as were scores for the individual subscales.

The level of organisational influence on nursing was measured by the newly developed Organisational Influence on Nursing Scale. This scale is an 8 item instrument seeking responses on frequency of organisational behaviours on a 5 point likert scale from 'always'=5 to 'never'=1. Two of the items on this scale are reverse scored (items 4 and 7) and these were recoded post data entry. More indepth analysis of this instrument was conducted. The reliability of the instrument was assessed as well as the inter-item correlations for all items.

The relationship between the personal characteristics of participants and perceived levels of clinical autonomy and Nurse/Physician collaboration were assessed. The magnitude of relationship were assessed by calculating eta squared for comparative statistics whereas correlation co-efficients were assessed for strength of relationship. Except for manually calculating eta-squared for comparitive statistics all other statistical analysis were conducted using IBM SPSS version 20. All tests were 2-tailed. In terms of statistical significance a p-value of <0.05 was considered to be statistically significant in this study.

4.12 Ethical Considerations

According to Polit and Beck (2006a) nurses face ethical dilemmas in their practice every day and these dilemmas extend into the conduct of research by nurses. The rights of those involved in the research process need to be protected over and above the objectives of the study. There have been a number of Codes of Ethics

developed since the Second World War in response to violations of human rights during the conduct of research (Polit and Beck, 2006a). Polit and Beck (2006a) identify the Nuremberg Code as one of the first Ethical Codes developed following revelations about the Nazi atrocities during World War II which was followed by the Declaration of Helsinki in 1964 (revised in 1975). These codes aim to protect participants and subjects of research and provide the foundation for many organisations' individual professional codes of ethics around research.

In Ireland An Bord Altranais agus Cnaimhseachais (formerly An Bord Altranais) regulate the professions of Nursing and Midwifery. Current professional guidance for Nurses and Midwives in Ireland in terms of conducting research or involvement in research indicates that they need to ensure privacy and confidentiality of those participating in research as well as upholding participants' right to refuse participation and to make an informed consent (An Bord Altranais, 2000). Polit and Beck (2006a) indicate that the Belmont Report in the USA provided a model for many disciplines in developing their codes of ethics in terms of conducting research. This report was issued by the National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research in 1978 and three ethical principles for the conduct of research namely *beneficence*, *respect for human dignity* and *justice* (Polit and Beck, 2006a).

Beneficence

This principle includes freedom from harm, freedom from exploitation and the risk/benefit ratio to participants in a research study (Polit and Beck 2006). This principle expects the researcher to 'above all do no harm' to participants. This study did not inflict any physical harm on participants as there was no specific

physical intervention involved in the study. In terms of the psychological risks to participants, these were minimal. Participants were asked to give information about themselves in terms of gender, age, education and experience. As all participants were at the same grade i.e. staff nurse, the group was reasonably homogenous and therefore confidentiality was relatively easy to assure. The instruments used asked respondents to indicate their perceptions of behaviours that indicated clinical autonomy and collaboration as well as organisational issues influencing their practice. These instruments were not viewed as causing any harm for participants and did not expose them to any undue exploitation. In terms of risk/benefit ratio Polit and Beck (2006a) suggest that researchers should ask themselves "...how comfortable they would feel having family members participate in the study" (pg. 76) or whether the researcher themselves would have any difficulty in participating in this study. I have participated in many similar studies in the past and have not felt that I was harmed in any way through my participation.

Respect for Human Dignity

Self determination means that participants have the right to decide whether to participate in the study or not. This principle involves the right to self determination by participants as well as full disclosure in terms of making an informed consent to participate. The information leaflet provided to participants (Appendix XI) clearly articulated that participants had the right not to complete the questionnaire without fear of sanction. The confidentiality ensured by anonymous completion of the questionnaire served to reassure participants that those who did or did not complete the questionnaire would equally not be identifiable. There were no coercive means used to induce participation in the study by subjects and involvement was entirely on a voluntary basis.

There was full disclosure to participants about what was involved in participation in the study including issues around confidentiality, data handling and storage and time and effort required to participate. Participants were competent adults involved in a low risk study. Participation in the study was on a voluntary basis. A specific consent form was not employed for this study as completion of the questionnaire was considered implied consent. Participants were informed in the questionnaire information leaflet (Appendix XI) that completion and return of the questionnaire on a voluntary basis was an assumption of consent to participate.

Justice

This principle relates to participants right to fair treatment and privacy. Fair treatment, according to Polit and Beck (2006a) includes the fair and non-discriminatory selection of participants. In this study all of the study participants who met the inclusion criteria were invited to participate. The inclusion criteria were developed to examine a specific group or grade within nursing and to examine the concepts under investigation in relation to a specific specialty within nursing. These choices were made based on previous research indicating a paucity of research in relation to the concepts and the population under investigation.

Access to the researcher was ensured by including the researcher's contact details on the questionnaire participant information. Participants and potential participants were invited to contact the researcher whenever they felt the need to do so. I, as the researcher, also visited the research sites during the data collection phase of the study and made myself readily available to participants if they had any issues or questions about the study.

Individual participants were not identifiable in this study. Participants were not asked for their name, date of birth or any other unique personal identifiers. There were no participant identification numbers or codes on the questionnaires and all participants were of a grade that constitutes the majority of nurses working in Emergency Departments. All questionnaires were kept in a locked cabinet within a locked office only used by the researcher throughout this study, again to ensure privacy and confidentiality of participants. All data gathered as part of this study will be stored in accordance with the University College Cork (2010) 'Code of Research Conduct' (para. 9) for a period of 7 years by either myself as researcher or the principle investigator as appropriate. Data will be destroyed by confidential shredding after this period. No vulnerable populations were accessed in this study.

Research Ethics Board Approval

An Bord Altranais agus Cnaimhseachais require nurses to adhere to local policies and procedures in relation to the conduct of research studies (An Bord Altranais, 2000). To this end Ethical Approval was sought from the Cork Research Ethics Committee (CREC) through submission of the appropriate research ethics approval protocol. Ethical approval was granted for the conduct of this research study by the chair of the CREC (appendix VIII). A separate ethics application was required to access one of the units included in the study. Ethical approval was also granted by this ethics committee to conduct the study.

Summary

This study sought to investigate clinical autonomy and Nurse/Physician collaboration among emergency nurses. The specific aims, to measure levels of clinical autonomy and Nurse/Physician collaboration and to establish if a relationship existed between these concepts and demographic variables of age, experience, education and organisational influence were identified at the beginning of this chapter. This chapter outlines and explains the methodological issues in conducting this study. A descriptive correlational study was conducted and described in this chapter. The specific objectives of the study are given along with proposing a number of hypotheses that were tested. Rationale for sampling and instrument selection are provided as well as information on the development of a scale to measure organisational factors influencing clinical autonomy. Issues in accessing the research sample are discussed. The rigor of the instruments used is discussed contributing to the justification of their selection to measure the concepts under investigation. Data analysis is discussed and the generation of descriptive and inferential statistics explained in terms of handling the data gathered during the study. This chapter also outlines the adherence to ethical principles and codes in conducting research for nurses as well as the local research ethics approval process.

In the following chapter the findings generated from the analysis of data are presented.

Chapter 5

Research Findings

Introduction

In this Chapter the findings from the research will be presented. The primary aim of this study was to investigate the levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses. This research study also aimed to establish if there was a relationship between clinical autonomy and Nurse/Physician collaboration and demographic variables of age, experience and education as well as investigating if organisational influences have any relationship to the concepts.

Firstly, descriptive statistics for the characteristics of the study sample will be presented in this chapter. Next, the objective of measuring the levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses will be met by presenting the results of participant scores for the Dempster Practice Behaviours Scale (DPBS) (Dempster, 1990) and the Nurse/Physician Collaboration Scale (NPCS) (Ushiro, 2009). Levels of organisational influence on the practice of participant emergency nurses will also be presented in terms of participant scores on the Organisational Influences on Nursing Scale which was developed for this study. The hypotheses that are presented in Chapter 4 were tested against the results presented in this chapter. All results will be presented in text with graphs and tables included in support.

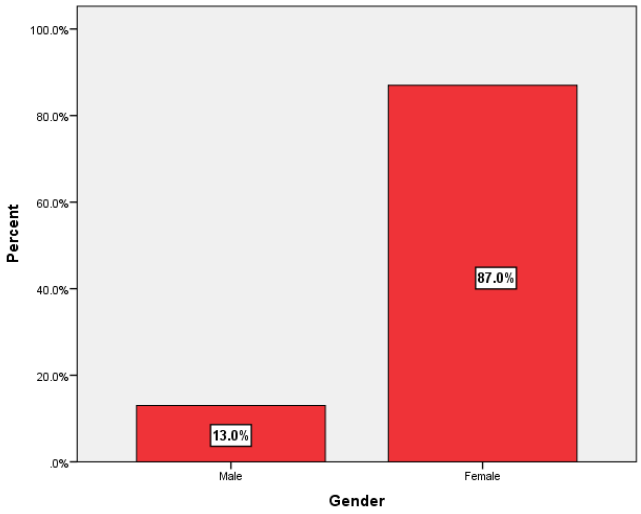
5.1 Sample Characteristics

Gender

As described in the last chapter the sample in this study included staff nurses working in 3 EDs in the Munster area in Ireland. A total of 141 questionnaires were distributed to staff nurses working in these departments with 100 questionnaires returned representing a 70.9% response rate.

The majority of participants were female (87%) with males making up 13% of the sample. This difference in gender distribution is not surprising in the nursing profession.

Figure 5.1 Sample Gender Distribution

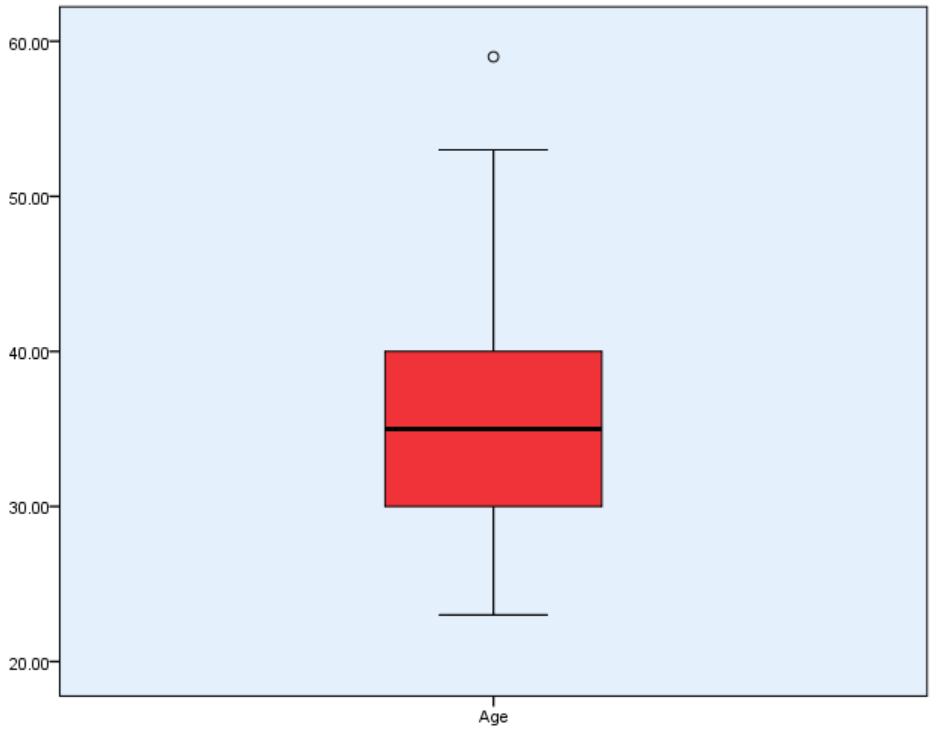


Age

The youngest participant in this study was 23 years of age with the oldest being 59 years. The mean age of participants was 35.57 years (SD=7.83) and the age distribution is represented in the boxplot below (Figure 5.2). As the boxplot

demonstrates the oldest participant was an outlier with the next oldest participant being 53 years old.

Figure 5.2 Age Distribution of Participants



Registrations Held by Participants

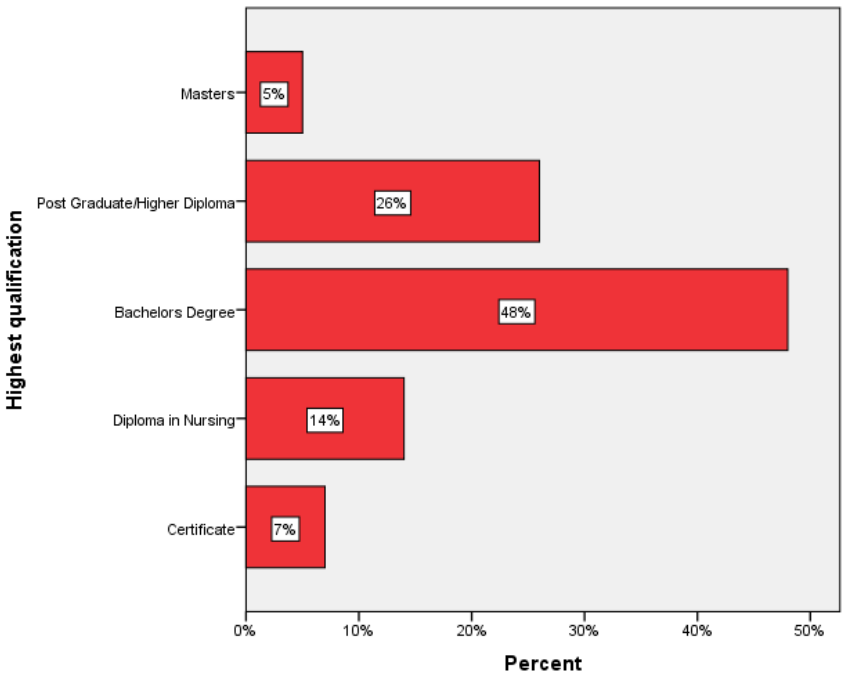
Participants were asked to indicate on which divisions of the nurses register they were registered. All participants in this study were registered as general nurses. Second registrations were held by 14% of the sample with 7% holding registration as a midwife (RM), 3% as psychiatric nurses (RPN) and 4% as children's nurses (RCN). None of the sample were registered as nurses in intellectual disability (RNID) or nurse prescribers of medicinal products (RNP). In the context of clinical autonomy and expanded roles it is interesting that none of the sample were registered to prescribe medicinal products. Also of note was the scarcity of nurses

holding registrations as children's nurses as all EDs accessed for this study care for both an adult and child population unlike in some other areas in Ireland where adults and children are cared for in separate departments.

Education

Participants were asked to give some information on their academic qualifications. Options given to participants ranged from certificate level up to Doctoral level qualifications. The traditional minimum level of qualification for nurses, i.e. hospital certificate level together with registration as a nurse, was held by only 7% of the study participants as their highest level of qualification. The majority indicated that their highest level of qualification was Bachelors Degree with almost half of participants (48%) indicating that this was their highest level of qualification. In terms of undergraduate qualification, 14% indicated that they had reached Diploma level as their highest level of qualification. Interestingly almost one third (31%) of participants indicated that they had achieved post graduate qualifications with 26% reaching Higher Diploma/Postgraduate Diploma level while 5% of participants indicated that they possessed Masters Degrees. This is notable as all participants were at the basic staff nurse grade. The barchart below demonstrates the highest level of qualification achieved by participants.

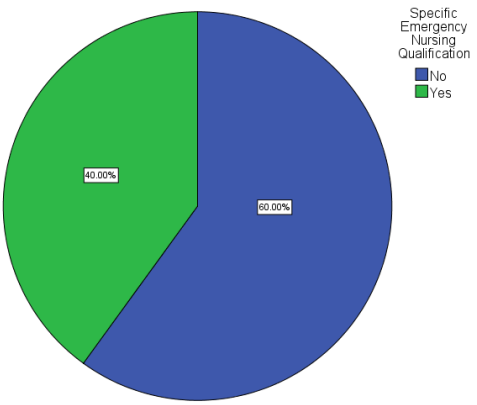
Figure 5.3 Highest Level of Qualification



Specific Emergency Nursing Qualification

As the ED is considered a specialist practice area participants were asked to indicate if they had achieved a specific emergency nursing qualification. Forty percent of participants had achieved a specific emergency nursing qualification while 60% had no specific emergency nursing qualifications. The pie chart below shows this distribution (Figure 5.4).

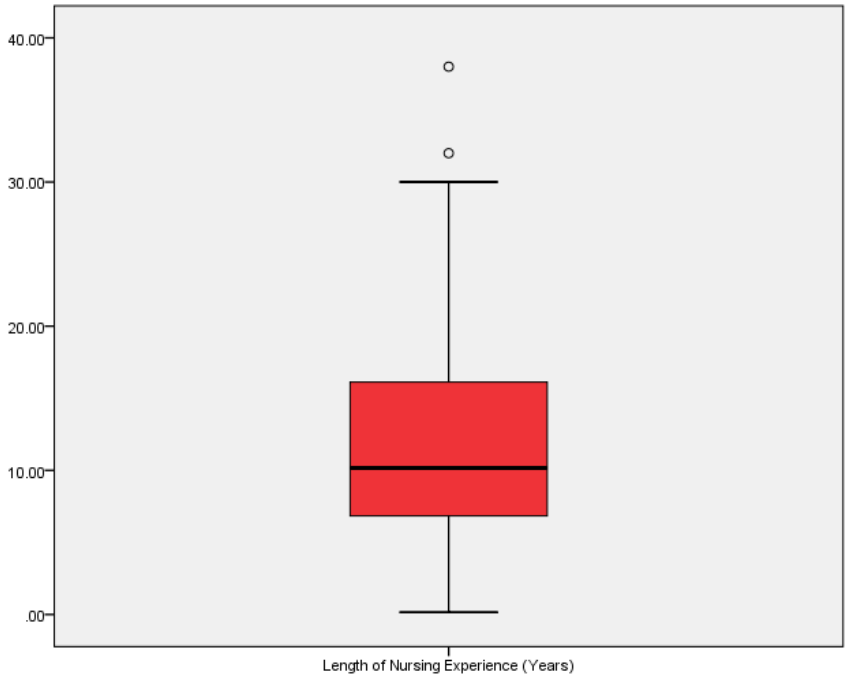
Figure 5.4 Specific Emergency Nursing Qualification



Length of Nursing Experience

Participants were asked about their length of experience as a nurse. Participants gave information on length of experience in years and months. These values were combined to give their length of experience in terms of years. The shortest length of experience for participants was 0.17 years (2 months) with nurses with the longest length of experience indicating that they had being practicing for 38 years. However, this variable was found to be positively skewed with a skewness coefficient of 0.894 indicating that the majority of participants possessed less than the mean length of experience (Burns and Grove, 2005). The median length of experience of participant staff nurses was 10.17 years (IQR=9.44). Below is the box plot representing the data on length of nursing experience among participants (Figure 5.5).

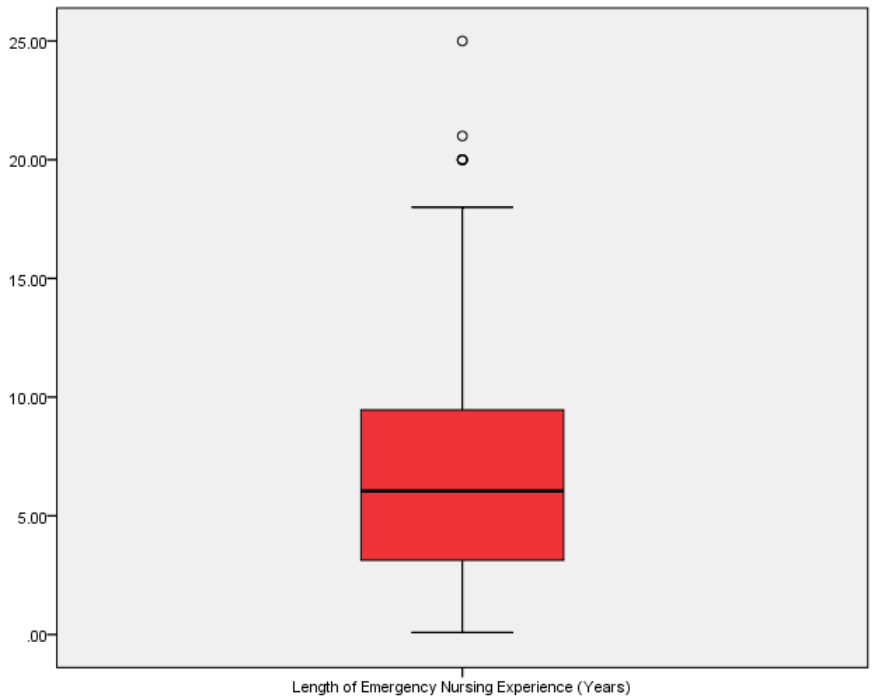
Figure 5.5 Length of Nursing Experience



Length of Emergency Nursing Experience

Similar to the question on length of nursing experience participants were asked to indicate in years and months how long they had been working in the area of emergency nursing. Again, these values were combined to give participants length of emergency nursing experience in years. The length of emergency nursing experience among participants varied from 1 month to 25 years. The mean length of experience was 7.07 years (SD=5.33) with the median length of experience being 6.04 years (IQR=6.37). The distribution was positively skewed with a skewedness coefficient of 1.07. This indicates that the majority of participants possessed less than the mean length of experience. The distribution of length of emergency nursing experience among participants is indicated in the box plot below (Figure 5.6).

Figure 5.6 Length of Emergency Nursing Experience



Sample Characteristics Summary

To summarise, the majority of participants in this study were female. The mean age of participants was 35.57 years (SD=7.83). While all participants held registration as Registered General Nurses with the Nursing and Midwifery Board of Ireland, only 14% held an additional nursing registration. The highest level of qualification achieved by participants was mainly Bachelors degree level (48%) with 31% indicating that their highest level of academic qualification was at postgraduate level, either Higher/Postgraduate diploma level (26%) or Masters degree level (5%). Only 7% of participants indicated that their highest level of qualification was certificate level. Forty percent of participants indicated that they had attained a specific qualification in emergency nursing. In relation to the levels of experience of participants data was gathered on their length of nursing experience overall (median 12.2 years (IQR=9.44) and length of emergency nursing experience (median 6.04 years (IQR=6.37). A summary of this data is presented in Table 5.1 below.

Table 5.1 Summary of Sample Characteristics

Characteristic	n*
Gender	
Female	87
Male	13
Age in years: mean(SD)	35.57 (7.83)
Registration Discipline	
General Nursing (RGN)	100
Midwifery (RM)	7
Psychiatric Nursing (RPN)	3
Children's Nursing (RCN)	4
Intellectual Disability Nursing (RNID)	0
Nurse Prescriber (RNP)	0
Highest Level of Qualification	
Certificate	7
Diploma in Nursing	14
Bachelors Degree	48
Higher/ Postgrad Diploma	26
Masters Degree	5
PhD/Doctoral Degree	0
Specific Emergency Nursing Qualification	
Yes	40
No	60
Length of Experience: median(IQR)	
Nursing	10.17 (9.44)
Emergency Nursing	6.04 (6.37)

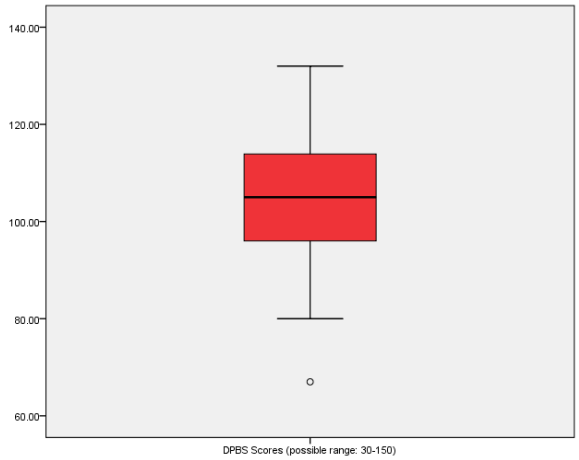
*n=% unless otherwise specified

5.2 Level of Clinical Autonomy

One of the primary objectives of this study was to measure the level of clinical autonomy among emergency nurses. The level of clinical autonomy among participants was calculated as participants' total score on the DPBS (Dempster, 1990). This 30 item scale asked participants their level of agreement with statements given about their practice on a Likert scale from 1 ('not at all true') to 5 ('extremely true'). Possible scores on this scale range from 30 to 150 with a higher score indicating a higher level of clinical autonomy. The reliability of the DPBS was also assessed in this study. The instrument demonstrated good reliability with a Cronbach's alpha of 0.86.

The mean score for participants' responses to the DPBS was 104.54 (SD=12.53). The minimum score achieved among participants was 67 which was much lower than the next lowest score of 82. The highest score among participants was 132. The author of this scale does not give an indication of how to interpret the findings from responses to this scale and therefore it is difficult to determine whether this finding indicates weak moderate or stong levels of clinical autonomy. As discussed in chapter 6, there are a number of studies that have used the DPBS and the findings from these studies provide a benchmark with which to judge the results from this study. With a mean score of 104.54 it would seem that participants indicate that they have moderate levels of Clinical Autonomy. However, there is quite a wide range of responses indicating very low levels of Clinical Autonomy among some participants. Participants' scores on the DPBS are represented in the boxplot below.

Figure 5.7 Levels of Clinical Autonomy



5.3 Level of Nurse/Physician Collaboration

This study had as one of its primary objectives to measure the levels of Nurse/Physician collaboration among emergency nurses. This was measured using the NPCS (Ushiro, 2009). The Nurse/Physician Collaboration Scale (NPCS) (Ushiro, 2009) is a 27-item scale that measures the levels of Nurse/Physician collaboration. Participants were asked to indicate the frequency with which named behaviours occur in their practice as nurses. The instrument is comprised of 3 subscales namely *'about sharing patient information'*, *'about decision-making process on the cure/care'* and *'about the relationship between nurse and physician'*. Scores are from 1 for 'always' to 5 for 'never'. Unlike the DPBS a lower score on the NPCS indicates higher levels of Nurse/Physician collaboration.

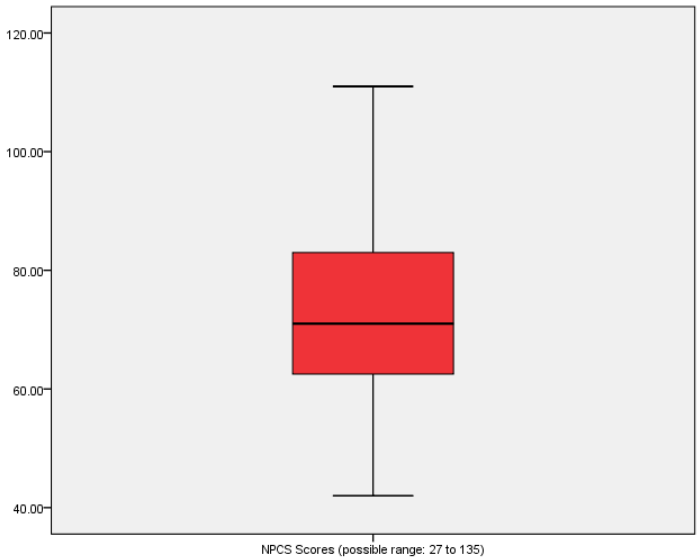
Overall scores for responses to this instrument were calculated as well as scores for each individual subscale and are presented below. The reliability of the instrument as well as the individual subscales were assessed as part of this study. The

reliability of the scale overall was good with a Cronbach's alpha of 0.918. Cronbach's alpha calculated for each of the subscales indicated that the subscales too demonstrated good reliability (*about sharing patient information* 0.816, *about decision-making process on the cure/care* 0.895, and, *about the relationship between nurse and physician* 0.828).

NPCS Overall Scores

Overall levels of collaboration between nurses and physicians were calculated by combining the results of the 3 subscales. The scores on this scale range from 27 to 135. Lower scores on this scale indicate high levels of collaboration between nurses and physicians and higher scores indicate low levels of collaboration between nurses and physicians. Respondent scores ranged from 42 to 111. The mean score for respondent staff nurses was 72.56 (SD 13.34). Figure 5.8 below demonstrates the overall respondent scores to this scale. This graphical representation of overall results on the scale demonstrates that the majority of responses were in the upper half of the range indicating poorer levels of Nurse/Physician collaboration between staff nurses and physicians in emergency departments.

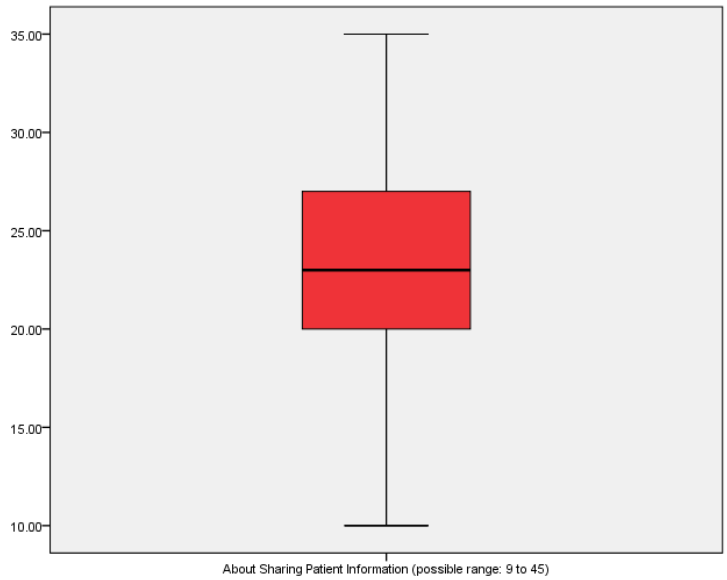
Figure 5.8 Levels of Nurse/Physician Collaboration (NPCS Scores)



Subscale 1: Sharing Patient Information

Possible scores on this subscale range from 9 to 45 with the lower the score participants achieve on this scale the higher the level of Nurse/Physician collaboration. The mean score for this subscale was 23.18 (SD 4.84) meaning that participants in this study demonstrated moderate levels of Nurse/Physician collaboration. When responses are graphically represented on a boxplot it is clear that the responses have reasonably normal distribution with slightly more than half of responses appearing upper portion of the box. This indicates lower scoring among a slight majority of participants about sharing patient information. The responses to this subscale have been plotted on the boxplot in Figure 5.9 below.

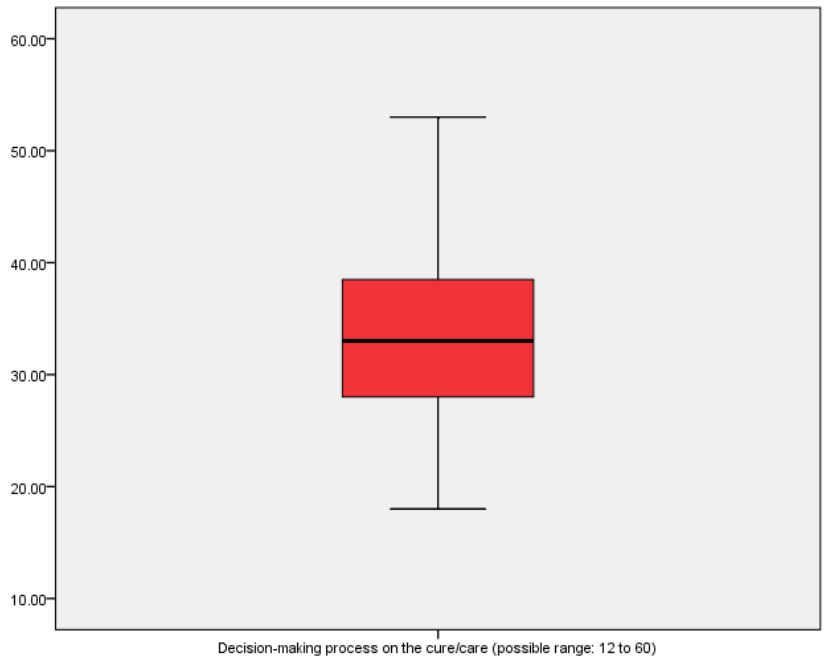
Figure 5.9 Sharing Patient Information



Subscale 2: Decision-Making Process on Cure/Care

This subscale contained 12 items with a possible score ranging from 12 (indicating high levels of involvement by nurses in the decision-making process on the cure/care of patients with physicians) to 60 (indicating low levels). The mean score for participant (mean 33.62 (SD 7.25) indicates reasonably low levels of involvement in the decision-making process about patient cure and care with physicians. A graphical representation of responses in figure 5.10 indicates that the responses demonstrated normal distribution.

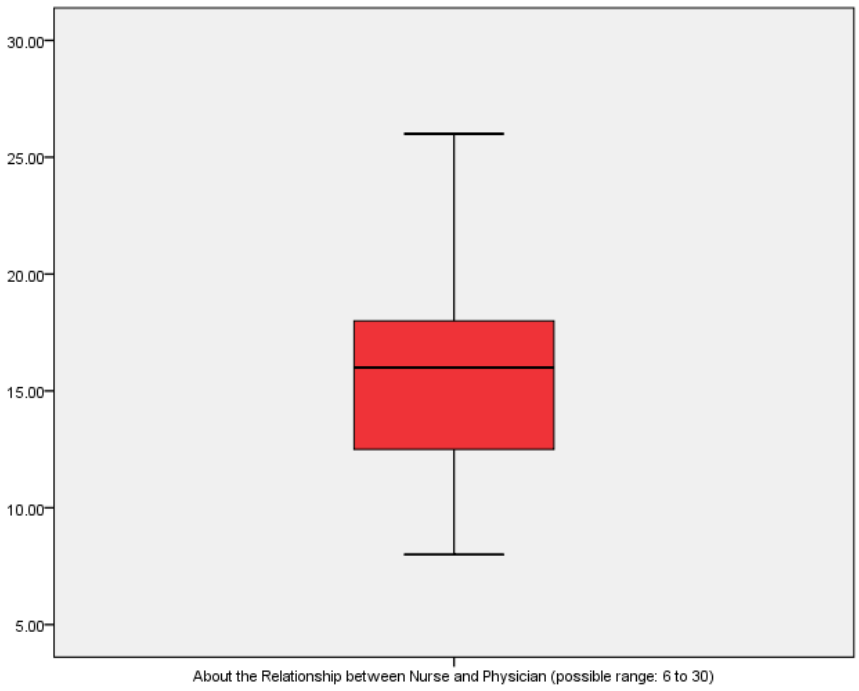
Figure 5.10 Decision-Making Process on the Cure/Care



Subscale 3: The Relationship Between Nurse and Physician

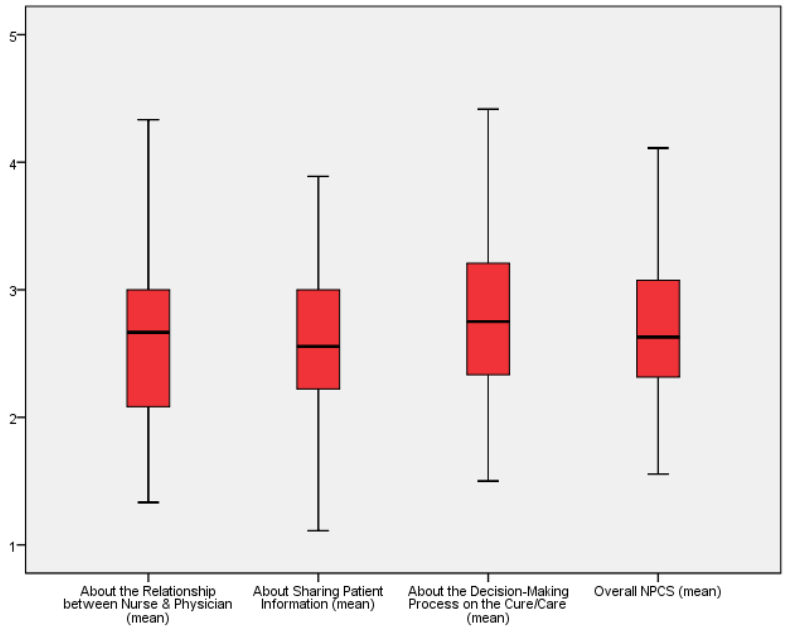
This subscale comprises of 6 items with a score of 6 indicating a strong Nurse/Physician relationship and a score of 30 indicating a weak Nurse/Physician relationship. The mean score for participant responses to this scale (mean 15.82 (SD 3.87) demonstrates that participants indicated that they perceived a moderately strong relationship between nurses and physicians in emergency care. The boxplot in Figure 5.11 below demonstrates the responses from participants to questions on this scale with responses appearing mostly in the lower half of the range and, in the absence of guidance from the author of the scale, may indicate strong relationships between nurses and physicians.

Figure 5.11 The Relationship Between Nurse and Physician



In considering the overall levels of Nurse/Physician collaboration in relation to the individual subscale responses it is apparent that the strongest element of Nurse/Physician collaboration is the relationship between nurses and physicians. The mean scores for responses to each subscale as well as the overall NPCS were calculated and are represented on the boxplot in figure 5.12.

Figure 5.12 Boxplot to Demonstrate NPCS Overall and Subscale Mean Scores



5.4 Organisational Influence in Nursing Practice

One of the aims of this study was to measure the level of organisational influence on the practice of emergency nurses. The measure used for this variable was created for this study. The Organisational Influence in Nursing Scale (described in Chapter 4) is an 8 item scale that aims to determine the extent to which an organisation influences the practice of nurses. As this is a new scale responses to individual questions on the scale were examined. No data were missing in responses from participants to this scale. Item 4 (*...exerts too much control over my clinical nursing practice*) and item 7 (*...has too many policies, procedures and routines involved in patient care*) on the scale were reverse worded and these were recoded prior to analysis. Possible scores on this scale range from 8 to 40 with higher scores indicating more positive influence of the organisation on nursing

practice. For descriptive purposes positive influence of the organisation on nursing is divided into low (8 to 18), moderate (19 to 29) and high (30 to 40) levels. This approach to categorising scores has been used in prior research (Amini, et al. 2013).

Organisational Influence on Nursing Scale – Reliability

As this scale was developed for this study and is being introduced as a new scale to measure the influence of the organisation on the clinical practice of nurses the reliability of the scale was assessed based on the data provided by respondents in this study. The scale was found to have good reliability for a newly developed instrument with a Cronbach's alpha of 0.797 (Burns and Grove, 2005).

The relationship between each item on the scale was also assessed and is presented in the inter-item correlation matrix in Table 5.2 below.

The inter-item correlations appear good overall for all items except for item 7 which demonstrates poor correlation with all items except for items 4 *('...exerts too much control over my clinical nursing practice')* and 5 *('...encourages me to contribute to decisions about patient care'*. The instrument was also assessed in terms of the value of each item to the overall scale. Table 5.4 below presents the information on the impact of removing any of the individual items from the scale on the overall reliability of the instrument

Table 5.2 Organisational Influence on Nursing Scale Inter-item Correlation Matrix

	*Item 1**	*Item 2*	*Item 3*	*Item 4*	*Item 5*	*Item 6*	*Item 7*	*Item 8*
*Item 1**	1.00							
Item2	.536	1.00						
Item 3	.512	.536	1.00					
Item 4	.298	.420	.342	1.00				
Item 5	.383	.339	.513	.216	1.00			
Item 6	.432	.504	.522	.326	.389	1.00		
Item 7	-.054	.096	.043	.341	.209	-.023	1.00	
Item 8	.470	.422	.538	.219	.474	.511	.173	1.00

*Item 1: *'...values my clinical nursing practice'*

Item 2: *'...gives me the authority to practice to my full capacity as a nurse'*

Item 3: *'...encourages me to communicate with all members of the healthcare team'*

Item 4: *'...exerts too much control over my clinical nursing practice'*

Item 5: *'...encourages me to contribute to decisions about patient care'*

Item 6: *'...encourages trusting and supportive relationships within the healthcare team'*

Item 7: *'...has too many policies, procedures and routines involved in patient care'*

Item 8: *'...recognises my knowledge and ability as a nurse'*

Table 5.3 Item Reliability - Organisational Influence on Nursing Scale

	Item	Corrected Item-Total Correlation	Cronbach's alpha if Item Deleted
1.	*'...values my clinical nursing practice'*	.545	.768
2.	*'...gives me the authority to practice to my full capacity as a nurse'*	.618	.757
3.	*'...encourages me to communicate with all members of the healthcare team'*	.654	.750
4.	*'...exerts too much control over my clinical nursing practice'*	.471	.780
5.	*'...encourages me to contribute to decisions about patient care'*	.551	.768
6.	*'...encourages trusting and supportive relationships within the healthcare team'*	.566	.765
7.	*'...has too many policies, procedures and routines involved in patient care'*	.150	.840
8.	*'...recognises my knowledge and ability as a nurse'*	.618	.757

As the table above demonstrates the overall reliability of the Organisational Influences on Nursing Scale would be reduced if any except for one of the items were removed. The only item that if removed would improve the reliability of the instrument is item 7 *'...has too many policies, procedures and routines involved in patient care'*. Removal of this item would improve the reliability of the instrument from a Cronbach's alpha of 0.797 to 0.840. This examination of the independent value of this item demonstrates that the inter-item correlation coefficient for this

item is 0.150 indicating that this item may not be measuring the same construct as the other items on the scale.

When the inter-item correlation matrix in table 5.3 is examined it is evident that most items have strong inter-item correlation scoring between 0.30 and 0.70. However, item 7 is negatively correlated with items 1 and 6 with weak correlations (based on Polit and Beck, 2006) with all items except item 4. An examination of the corrected total item correlation given in table 5.4 reveals that there is strong inter-item correlation between most items on the scale. However, item 7 *'...has too many policies, procedures and routines involved in patient care'* scores lower than the acceptable level of 0.20 (Polit and Beck, 2006a). Based on these findings it is clear that the Organisational Influence on Nursing Scale has good overall reliability however further examination reveals that item 7 *'...has too many policies, procedures and routines involved in patient care'* appears not to be measuring the same construct as the other items of the scale and that the scale would demonstrate stronger reliability if the item were removed, i.e. reliability co-efficient would be increased to 0.840 if item 7 is removed. As this study was the first to use the instrument, and the reliability of the scale overall was greater than 0.7 (Pallant, 2010), the item was included during analysis.

Frequency of Individual Item Responses

For all items, including item 7, respondents were asked to indicate how often the organisation in which they worked behaved in relation to a number of statements i.e. always, usually, sometimes, rarely or never. Frequency of responses to individual questions on the scale will be addressed in this section.

Item 1 on the Organisational Influence in Nursing Scale asked respondents to indicate *the frequency with which their organisation valued their clinical practice*. The majority of respondents (65%) believed that their organisation usually or always valued their clinical nursing practice while only 10% indicated that the organisation rarely valued their nursing practice and no one indicated that the organisation never valued their clinical nursing practice. This indicates a belief among participants that the organisations in which they worked valued their clinical nursing practice positively. Mean of scores for responses to this item was 3.69 (SD 0.84).

The next item on the scale was in relation to *authority from the organisation for participants to practice to their full capacity as a nurse*. Just over half of respondents indicated that the organisation in which they worked gave them the authority to practice to their full capacity as a nurse (57%). One respondent indicated that they were never given the authority to practice to their full capacity as a nurse with 7% of respondents indicating that happened rarely with their organisation. Less than half of respondents (43%) indicated that they are given the authority to practice to their full capacity sometimes or less often. Mean of scores for this item was 3.62 (SD 8.4).

The 3rd item on the scale asked about the *frequency with which organisations encouraged communication between nurses and all members of the healthcare team*. Respondents indicated that organisations were very positive on this issue with 77% of respondents indicating that the organisation in which they worked encouraged communication either usually (40%) or always (37%) with no respondent indicating that they were never encouraged to communicate with other

members of the healthcare team. Overall mean of scores for this item was 4.08 (SD 0.88).

The next item on the scale asked participants *about the level of control the organisation in which they worked had over their clinical nursing practice*. Most respondents indicated that while the organisation exerted too much control over their clinical practice sometimes (56%) less than 1 in 5 (18%) felt that this occurred usually or always. Indeed, over a quarter of respondents felt that the organisation exerted too much control either rarely or never (26%). Respondents therefore seemed positive about the level of control exerted over their clinical practice by the organisation in which they worked. As this was a negatively worded item it was reverse scored prior to analysis and the mean score was calculated. The mean of scores for this item was 3.08 (SD 0.75).

Respondents were asked about how often their organisation *encouraged them to contribute to decisions made about patient care*. The majority of respondents indicated that they were encouraged to contribute either usually (51%) or always (15%) with no respondent indicating that they were never encouraged to contribute to decisions about patient care. Mean of scores for item 5 on the instrument was 3.72 (SD 0.83).

Item 6 on the Organisational Influence in Nursing Scale asked respondents to indicate how often the organisation in which they worked *encouraged trusting and supportive relationships within the health care team*. The majority of respondents (90%) indicated that this occurred at least sometimes with nearly half of respondents (47%) indicating that this occurred either usually or always. Interestingly one in ten respondents indicated that they believed that the

organisation either rarely or never encouraged supportive relationships within the healthcare team. Overall mean of scores for responses to this item was 3.47 (SD 0.88).

The penultimate item on this instrument asked respondents about policies, procedures and routines involved in patient care. Nearly half of all respondents felt that the organisation in which they worked had *too many policies, procedures and routines involved in patient care* (47%). Just over one fifth (21%) believed that the organisation rarely (17%) or never (4%) had too many policies, procedures and routines involved in patient care. It is clear that respondents believe that the organisational policies, procedures and routines are excessive most of the time. As this was a negatively worded item it was reverse scored before analysis and calculation of mean. The mean of scores for this item was 2.62 (SD 1.07).

Finally respondents were asked to indicate how often the organisation *recognised their knowledge and ability as a nurse*. Positively the majority of respondents indicated that this happened either usually (55%) or always (12%). While 21% indicated that this happened sometimes only 12% indicated that it happened rarely and no respondent indicated that their organisation never valued their knowledge and ability as a nurse. Again this is quite positive in terms of how respondents perceived how they were valued as nurses by the organisation in which they worked. The mean of scores to this final item was 3.67 (SD 0.84)

A summary of the frequency of responses to each individual item (in order of appearance on the instrument) is given in Table 5.4 below.

Table 5.4 Summary Frequency of Responses to Individual Items on Organisational Influence on Nursing Scale

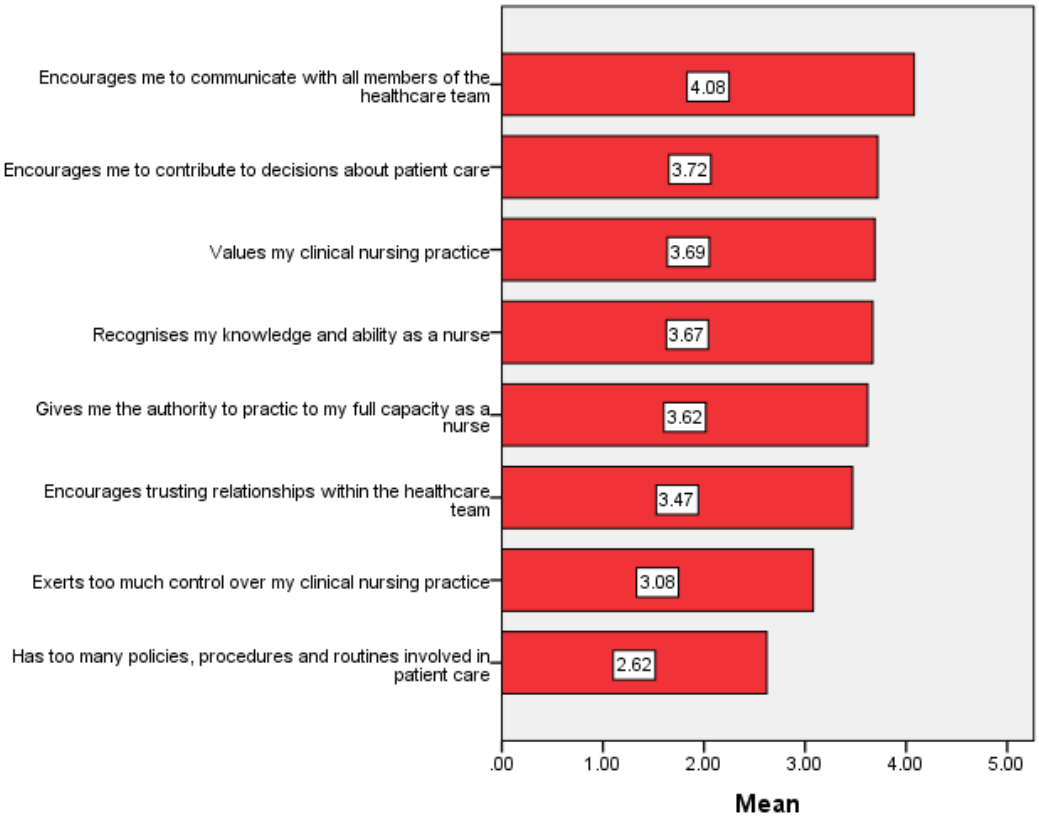
Item	Always	Usually	Sometimes	Rarely	Never	Total*
'...values my clinical nursing practice'	14	51	25	10	0	100
'...gives me the authority to practice to my full capacity as a nurse'	13	45	34	7	1	100
'...encourages me to communicate with all members of the healthcare team'	37	40	17	6	0	100
'...exerts too much control over my clinical nursing practice'	2	16	56	24	2	100
'...encourages me to contribute to decisions about patient care'	15	51	25	4	0	100
'...encourages trusting and supportive relationships within the healthcare team'	12	35	43	8	2	100
'...has too many policies, procedures and routines involved in patient care'	16	31	32	17	4	100
'...recognises my knowledge and ability as a nurse'	12	55	21	12	0	100

**All values are both number of responses and % (overall n=100)*

In order to analyse the data relating to item 4 (*...exerts too much control over my clinical nursing practice*) and item 7 (*...has too many policies, procedures and routines involved in patient care*) these were recoded and reverse scored. This is because both of these items are negatively worded. Following recoding of the negatively worded items calculation of means for each item was conducted. Mean scores for each item were ranked from highest to lowest to determine the greatest

to the least positive organisational influence on the clinical nursing practice of respondent emergency nurses. The rank order of responses in terms of mean scores for each item on the Organisational Influence in Nursing Scale is demonstrated graphically in Figure 5.13 below.

Figure 5.13 Rank Order of Means for Items on Organisational Influence in Nursing Scale (Range 1 to 5)



As figure 5.13 demonstrates partipants indicated that they believed that encouragement from the organisation in which the worked was the most frequent influence from their organisation on their practice. The least frequent influence on their practice was *'has too many policies, procedures and routines involved in patient care'*. The rank order of responses indicates that the positive influences on nursing practice were perceived as occuring more frequently than the less positive

influences such as *'exerts too much control over my clinical practice'* and *'has too many policies, procedures and routines involved in patient care'*.

Organisational Influence on Nursing Scale – Overall Scores

The possible range of scores on the overall instrument was from 8 (indicating least positive influence on nursing from organisations) to a maximum of 40 (indicating most positive influence on nursing from organisation). Participant responses to this instrument were assessed to obtain an overall mean score for the sample. The mean score for the sample was 27.95 (SD=4.48). Responses in this study indicate that respondents believed that overall the organisations in which they worked were quite positive in their influence on their nursing practice. A boxplot (Figure 5.14) is presented below.

Figure 5.14 Levels of Organisational Influence on Nursing

To summarise, the findings indicate that emergency staff nurse participants indicated that they had moderate levels of clinical autonomy with a mean score of 104.54 (SD=12.53) on the DPBS. Likewise, participants indicated that they had moderate levels of collaboration with physicians (M=72.56; SD=13.34). Overall respondents were positive about the influence of the organisations in which they worked on their nursing practice (M=27.95; SD=4.48). The instrument developed for this study to examine the influence of the organisation on the practice of nurses (Organisational Influence on Nursing Scale) demonstrated good reliability overall (Cronbach's= 0.797). Indeed, the DPBS (Cronbach's alpha=0.860) and the NPCS (Cronbach's alpha=0.918) and its subscales (*about sharing patient information* Cronbach's alpha=0.816, *about decision-making process on the cure/care* Cronbach's alpha=0.895 and *about the relationship between nurse and physician* Cronbach's alpha-0.828) all demonstrated good reliability in this study also.

The next sections of this chapter will address the relationship between the variables under investigation and testing of the hypotheses identified in Chapter 4.

5.5 Relationship between Levels of Clinical Autonomy and Personal Characteristics of Emergency Nurses

This section of the results chapter examines the relationships between personal demographic information supplied by participants in section 1 of the questionnaire and their perceived levels of clinical autonomy measured by their scores on the DPBS. Testing of the hypotheses offered regarding the relationship between participants' perceived levels of clinical autonomy and their gender, age, education and experience will be described.

The strength of the relationships will be interpreted following the guidelines suggested by Cohen (1988). According to Cohen (1988) a correlation is considered small if r=0.10 to 0.29 or -0.10 to -0.29, medium if r=0.30 to 0.49 or -0.30 to -0.49 and large if r=0.50 to 1.00 or -0.50 to -1.00.

The first relationship investigated in this study was between perceived levels of clinical autonomy and the gender of participants. This relationship is addressed in the first hypothesis posed in Chapter 4.

Hypothesis 1: There is no relationship between the perceived levels of Clinical Autonomy among emergency nurses and their gender.

An independent samples t-test was used to compare the means scores between male and female emergency nurse participants. There were no outliers and the assumptions that the dependent variable was normally distributed for each group (assessed by visual inspection of the boxplots and summary statistics and p=0.782 for males and p=0.786 for females from Shapiro Wilk test) and that there were equal variances in the two groups were satisfied (p=0.934 from Levene's test for equality of variances). There was no significant difference in scores between males (M=109.46, SD=12.01) and females (M=103.81, SD=12.50) t(98)=1.53, p=0.13. The magnitude of the difference in mean scores for males and females was small (eta squared=0.023). The null hypothesis that states that there is no relationship between the perceived levels of clinical autonomy among emergency nurses and their gender cannot be rejected meaning that there is no difference in levels of clinical autonomy between men and women who work as staff nurses in participant EDs.

The relationship between perceived levels of clinical autonomy among emergency nurses and their age was also investigated in this study.

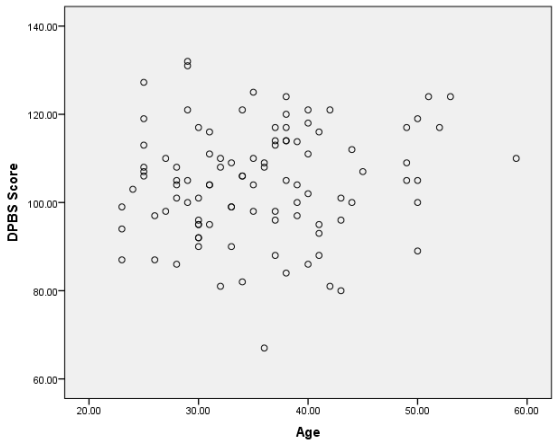
Hypothesis 2: There is no relationship between the age of emergency nurses and their perceived levels of clinical autonomy.

To decide on which correlational statistic to use to examine this relationship the data was examined to determine if it violated the assumptions for parametric correlational statistical testing i.e. the use of Pearson's Product-Moment Coefficient. A scatterplot (Figure 5.15) was generated for the relationship between participants' age and their scores on the DPBS. The boxplot for the age of participants indicates that there is an outlier at the upper end of the scale (Figure 5.2). Further analysis of this demonstrates that there is little difference between the 5% Trimmed Mean (35.27) and the original mean for the responses (35.57). Similarly, analysis of DPBS scores was also conducted. The boxplot for the DPBS responses (Figure 5.7) indicates that there appears to be one outlier with a low score. Examination of the 5% Trimmed Mean (104.71) and the original mean score (104.54) demonstrates that the scores are quite similar. According to Pallant (2010) when the original mean and the 5% Trimmed Mean scores are similar then the outliers can be retained.

Examination of the data points on the scatterplot for DPBS scores and age (Figure 5.15) demonstrates that there is no real pattern to the plots indicating poor correlation between the variables. The relationship between the variables appears to violate the assumptions of linearity and homoscedasticity. Due to this violation of the assumptions required for the use of Pearson's Product-Moment Coefficient the non-parametric alternative, Spearman's Rank Order Correlation was used to analyse the relationship between the variables. There was a small positive but non-

statistically significant correlation between perceived levels of clinical autonomy and the age of participant emergency nurses in this study [r=0.116, n=100, p=0.251]. Based on these findings the null hypothesis cannot be rejected meaning that the age of participant staff nurses had no influence over their levels of clinical autonomy.

Figure 5.15 Scatterplot for Relationship between DPBS Scores and Age of Participants



The relationship between perceived levels of clinical autonomy and the education of emergency nurses was investigated regarding their overall academic level of education and whether they had completed specialist emergency nursing education. The hypothesis offered in relation to level of education was tested first in this study.

Hypothesis 3: There is no relationship between perceived levels of clinical autonomy and levels of education among emergency nurses.

Data on levels of education were dichotomised into highest level of education to undergraduate and postgraduate level. Those participants who had achieved up to

and including degree level education were included in the undergraduate group (n=69) and those with postgraduate diploma and Masters level education were included in the postgraduate group (n=31). An independent-samples t-test was conducted to compare the differences in scores for clinical autonomy on the DPBS between the undergraduate and postgraduate groups of participants. On inspection of the boxplots there was one outlier in the postgraduate group but there appeared to be minimal differences between the mean scores and the 5% trimmed mean scores for those in the postgraduate group (104.19 & 104.48 respectively). The t-test was nonetheless conducted with and without the outlier included. There was no significant difference in the outcome of both t-tests so the results with all cases included are reported. The assumptions that the dependent variable was normally distributed for each group (assessed by visual inspection of the boxplots and summary statistics and p=0.331 for emergency nurses with undergraduate education and p=0.735 for emergency nurses with postgraduate education from Shapiro Wilk test) and that there were equal variances in the two groups were satisfied (p=0.423 from Levene's test for equality of variances) There was no significant difference between emergency nurses with undergraduate education (M=104.70, SD=11.59) and emergency nurses with postgraduate education (M=104.19, SD=14.60); p=0.85). The magnitude of the difference in means between emergency nurses with undergraduate and postgraduate education was found to be extremely small (eta squared=0.0003). These results indicate that the null hypothesis cannot be rejected meaning there was no difference in the levels of clinical autonomy between nurses who had completed undergraduate education only or had also completed postgraduate education.

In relation to the relationship of perceived levels of clinical autonomy and education of emergency nurses the value of specialist education was also investigated through testing of the following hypothesis:

Hypothesis 4: There is no relationship between perceived levels of clinical autonomy among emergency nurses and whether they have completed specific emergency nursing education.

Participants were asked to indicate if they had achieved an emergency nursing specific qualification. The achievement by participants of a specific emergency nursing qualification was an indication of completion of specific emergency nursing education. An independent-samples t-test was conducted to compare the differences in scores for clinical autonomy on the DPBS between participants who had (n=40) and who had not (n=60) achieved an emergency nursing specific qualification. On inspection of the boxplots there was one outlier in the group who had not achieved a specific emergency nursing qualification but there appeared to be minimal differences between the mean scores and the 5% trimmed mean scores for those in the group (103.74 & 103.94 respectively). The t-test was conducted both with and without the outlier included resulting in no real difference in outcomes. Therefore the results with all cases included is reported. The assumptions that the dependent variable was normally distributed for each group (assessed by visual inspection of the boxplots and summary statistics and p=0.679 for emergency nurses who had achieved a specific emergency nursing qualification and p=0.641 for emergency nurses who had not achieved a specific emergency nursing qualification from Shapiro Wilk test) and that there were equal variances in the two groups were satisfied (p=0.606 from Levene's test for equality of variances). There was no significant difference between emergency nurses who had

achieved an emergency nursing specific qualification (M=105.74, SD=13.27) and emergency nurses who had not achieved and emergency nursing specific qualification (M=103.74, SD=12.05); t(98)=0.783, p=0.606. The magnitude of the difference in means between emergency nurses who had achieved an emergency nursing specific qualification and those who did not was found to be extremely small (eta squared=0.006).

These results fail to reject the null hypothesis stating that there is no relationship between the achievement of an emergency nursing specific qualification and perceived levels of clinical autonomy among emergency nurses. This means that the completion of specialist emergency nursing education had no influence on the levels of clinical autonomy of participant staff nurses.

The next relationship examined in this study regarded the relationship between perceived levels of clinical autonomy and length of nursing experience among emergency nurses.

Hypothesis 5: There is no relationship between perceived levels of clinical autonomy and length of nursing experience among emergency nurses.

The distribution curve for participant scores on the DPBS indicates normal distribution of responses (Figure 5.16). However, the distribution of data on the length of nursing experience (Figure 5.17) is skewed to the left i.e. positively skewed. This indicates that the data violates the assumption of normality (Polit and Beck, 2006a) for parametric correlational statistics. Examination of the scatterplot generated from the data (Figure 5.18) demonstrates a random distribution of plots

indicating that the relationship between the variables do not satisfy the assumptions of linearity or homoscedasticity. Therefore parametric statistical tests are not appropriate in testing this hypothesis. The alternative Spearman's Rank Order Correlation (rho) was used to assess the relationship between these variables. Based on Cohen (1988) there was a small positive relationship between participants' perceived level of clinical autonomy and their length of nursing experience that was not statistically significant [r=0.168, n=100, p=0.095]. Based on this finding the null hypothesis cannot be rejected.

Figure 5.16 Distributions of Participant Scores on DPBS

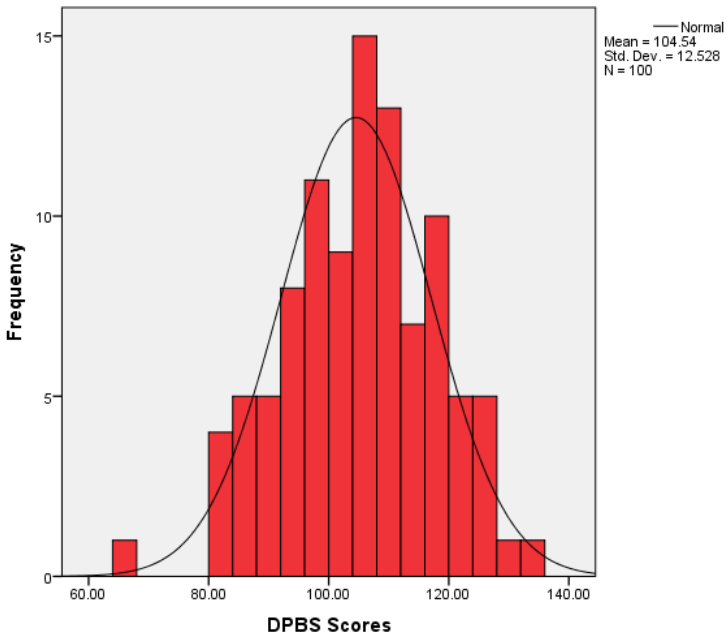


Figure 5.17 Distribution of Length of Nursing Experience among Participants

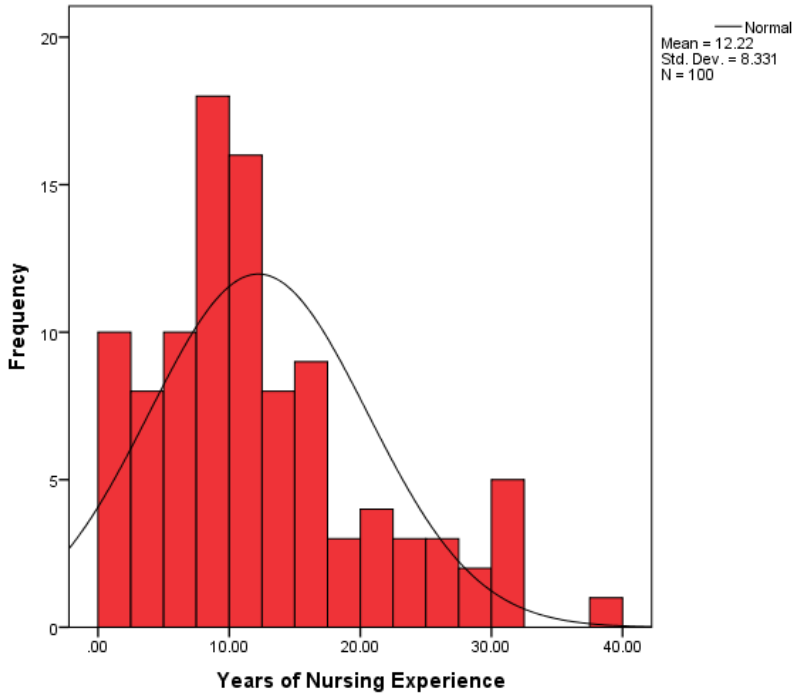
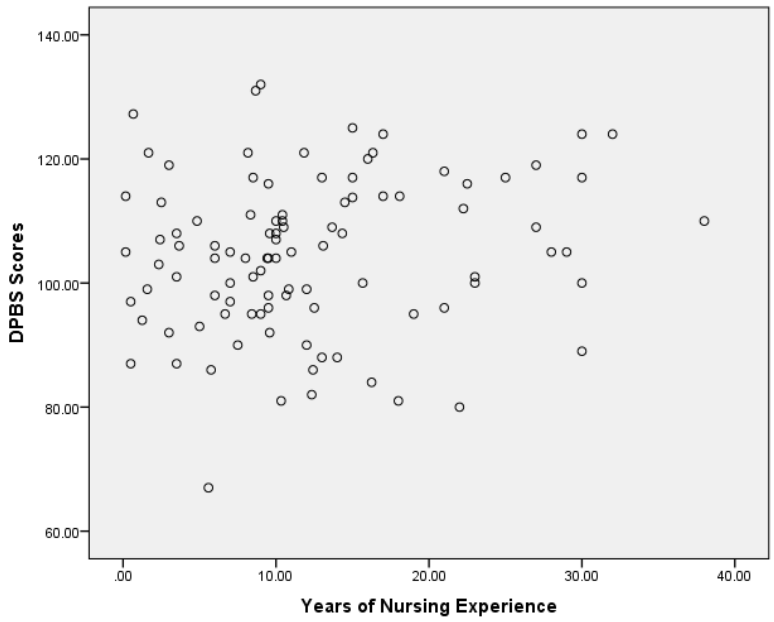


Figure 5.18 Scatterplot for DPBS Scores and Length of Nursing Experience



The relationship between length (in years) of emergency nursing experience and perceived levels of clinical autonomy among emergency nurses was also investigated. The following hypothesis regarding the relationship between these two variables was tested:

Hypothesis 6: There is no relationship between perceived levels of clinical autonomy and length of emergency nursing experience among emergency nurses.

In terms of selecting the appropriate statistical test to assess the relationship between the variables preliminary analyses were performed to identify compliance with assumptions for parametric testing of the relationship. As already established the data for the DPBS is normally distributed (Figure 5.16). However, the data for length of emergency nursing experience, like that for nursing experience, appears positively skewed (Figure 5.19) therefore violating the assumption of normality. The scatterplot (Figure 5.20) for the data indicates violation of the assumptions of linearity and homoscedasticity for parametric statistics. Therefore, the relationship between the variables was investigated using Spearman's Rank Order Correlation. Based on Cohen (1988) there was no relationship between participants' perceived level of clinical autonomy and their length of emergency nursing experience [r=0.072, n=100, p=0.479]. Based on this finding the null hypothesis cannot be rejected.

Figure 5.19 Distribution of Length of Emergency Nursing Experience among Participants

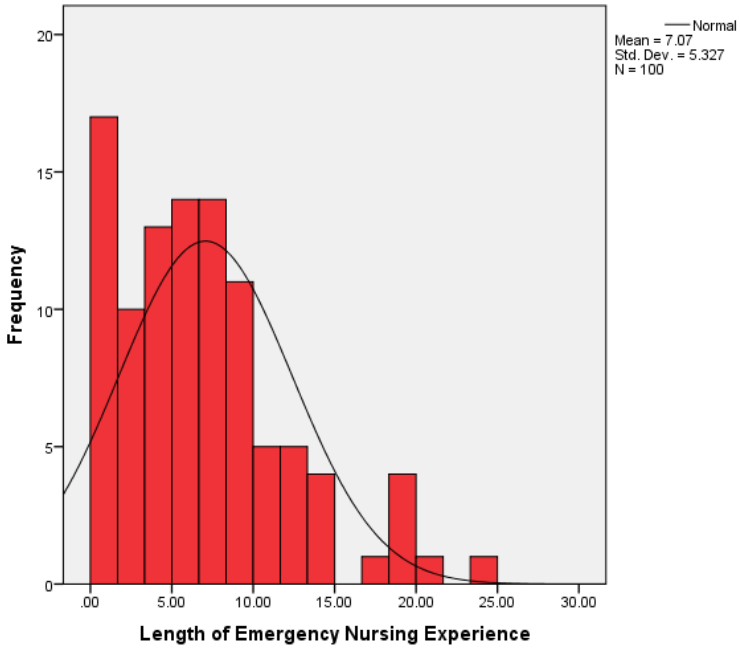
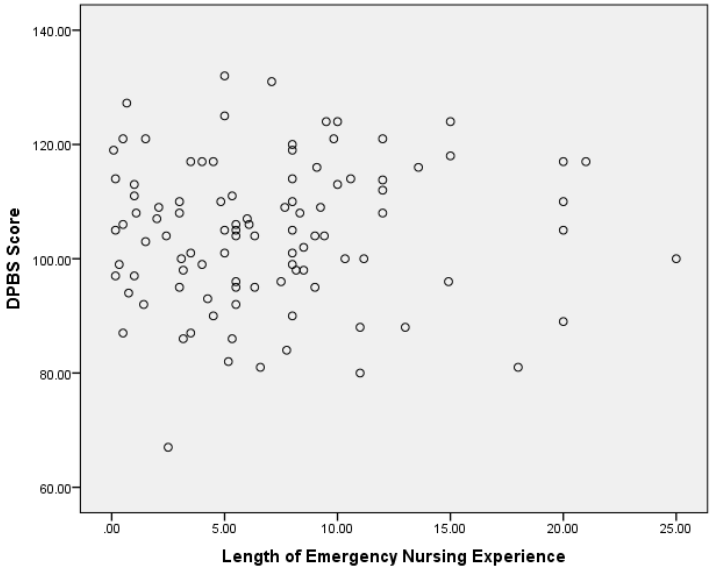


Figure 5.20 Scatterplot for Relationship between DPBS Scores and Length of Emergency Nursing Experience



In summary, it is evident that the personal characteristics of emergency nurses have no significant effect on their perceived levels of clinical autonomy. None of the null hypotheses regarding the relationship between perceived levels of clinical autonomy and gender, age, level of education, specialist education, length of nursing and specifically emergency nursing experience could be rejected. The magnitude of the relationship between DPBS scores and the personal characteristics of participants were found to be small. The next section of this chapter will examine the relationship between the personal characteristics of participants and their perceived levels of Nurse/Physician collaboration.

5.6 Relationship between Levels of Nurse/Physician Collaboration and Personal Characteristics of Emergency Nurses

This section of the chapter examines the relationship between perceived levels of Nurse/Physician collaboration and the personal characteristics of participant emergency nurses. A number of hypotheses regarding the relationship between Nurse/Physician collaboration and the personal characteristics of participants were tested and are described in this section.

The first relationship examined was between perceived levels of Nurse/Physician collaboration and the gender of participant emergency nurses. The null hypothesis regarding this relationship states:

Hypothesis 7: There is no relationship between the perceived levels of Nurse/Physician Collaboration among emergency nurses and their gender.

An independent samples t-test was conducted to compare the means scores between male and female emergency nurse participants. There were no outliers and

the assumptions that the dependent variable was normally distributed for each group (assessed by visual inspection of the boxplots and summary statistics and p=0.070 for males and p=0.912 for females from Shapiro Wilk test) and that there were equal variances in the two groups were satisfied (p=0.883 from Levene's test for equality of variances). There was no significant difference in scores on NPCS between males (M=73.00, SD=13.51) and females (M=72.50, SD=13.40), t(98)=0.126, p=0.90. The magnitude of the difference in mean scores for males and females was extremely small (eta squared=0.0002). Therefore the null hypothesis stating that there is no relationship between perceived levels of Nurse/Physician collaboration and the gender of emergency nurses cannot be rejected in this case.

The relationship between levels of education and perceived levels of Nurse/Physician collaboration was also investigated. Similar to the examination of the relationship between levels of education and clinical autonomy among emergency nurses both academic level of education and the completion of specialist emergency nursing education were examined. Firstly, the academic level of participants' education were dichotomised into undergraduate (upto and including degree level) and post graduate level education (as described earlier). The null hypothesis offered regarding this relationship is as follows:

Hypothesis 8: There is no relationship between perceived levels of Nurse/Physician Collaboration and levels of education among emergency nurses.

An independent-samples t-test was conducted to compare the differences in scores for clinical autonomy on the NPCS between the undergraduate and postgraduate groups of participants. There were no outliers and the assumptions that the dependent variable was normally distributed for each group (assessed by visual

inspection of the boxplots and summary statistics and p=0.640 for the undergraduate group and p=0.670 for the postgraduate group from Shapiro Wilk test) and that there were equal variances in the two groups were satisfied (p=0.177 from Levene's test for equality of variances). There was no significant difference in perceived levels of Nurse/Physician collaboration between emergency nurses with undergraduate education (M=73.00, SD=14.02) and emergency nurses with postgraduate education (M=71.58, SD=11.85); t(98)=0.492, p=0.62. The magnitude of the difference in means between emergency nurses with undergraduate and postgraduate education was found to be extremely small (eta squared=0.002).

These findings fail to reject the null hypothesis there is no relationship between level of education and perceived levels of Nurse/Physician collaboration among emergency nurses.

The relationship with specific specialist emergency nursing education and their perceived levels Nurse/Physician collaboration among participants were also examined.

Hypothesis 9: There is no relationship between perceived levels of Nurse/Physician collaboration among emergency nurses and whether they have completed specific emergency nursing education.

Participants were asked to indicate if they had achieved an emergency nursing specific qualification. An independent-samples t-test was conducted to compare the differences in scores for clinical autonomy on the NPCS between participants who

had (n=40) and who had not achieved (n=60) an emergency nursing specific qualification. There were no outliers and the assumptions that the dependent variable was normally distributed for each group (assessed by visual inspection of the boxplots and summary statistics and p=0.953 for the group with a specific emergency nursing qualification and p=0.247 for the group without a specific emergency nursing qualification from Shapiro Wilk test) and that there were equal variances in the two groups were satisfied (p=0.784 from Levene's test for equality of variances). There was no significant difference in perceived levels of Nurse/Physician collaboration between emergency nurses who had achieved an emergency nursing specific qualification (M=71.71, SD=13.68) and emergency nurses who had not achieved and emergency nursing specific qualification (M=73.13, SD=13.20); t(98)=-.521, p=0.603. The magnitude of the difference in means between emergency nurses who had achieved an emergency nursing specific qualification and those who did not was found to be extremely small (eta squared=0.003).

These findings fail to reject the null hypothesis that there is no relationship between the achievement of an emergency nursing specific qualification and perceived levels of Nurse/Physician collaboration among emergency nurses.

Nursing experience was also investigated in relation to perceived levels of Nurse/Physician collaboration among participant emergency staff nurses. Similar to the relationships examined in earlier in this Chapter nursing experience and specifically emergency nursing experience were examined.

Hypothesis 10: There is no relationship between perceived levels of Nurse/Physician collaboration and length of nursing experience among emergency nurses.

An initial examination of the data was conducted before conducting analysis in relation to this hypothesis. The distribution curve for participant scores on the NPCS indicates normal distribution of responses (Figure 5.21). However, the distribution of data on the length of nursing experience (Figure 5.17) is skewed to the left i.e. positively skewed indicating that the data does not satisfy the assumption of normality for parametric correlational statistics (Polit and Beck, 2006a). Examination of the scatterplot generated from the data (Figure 5.22) demonstrates a random distribution of plots indicating that the relationship between the variables violated the assumptions of linearity and homoscedasticity. Therefore parametric statistical tests are not appropriate in testing this hypothesis. The alternative Spearman's Rank Order Correlation was used to assess the relationship between these variables. There was no relationship between perceived level of Nurse/Physician collaboration and the length of participants' nursing experience [r=-0.056, n=100, p=0.577]. Based on this finding the null hypothesis cannot be rejected.

Figure 5.21 Histogram for Distribution of NPCS Scores

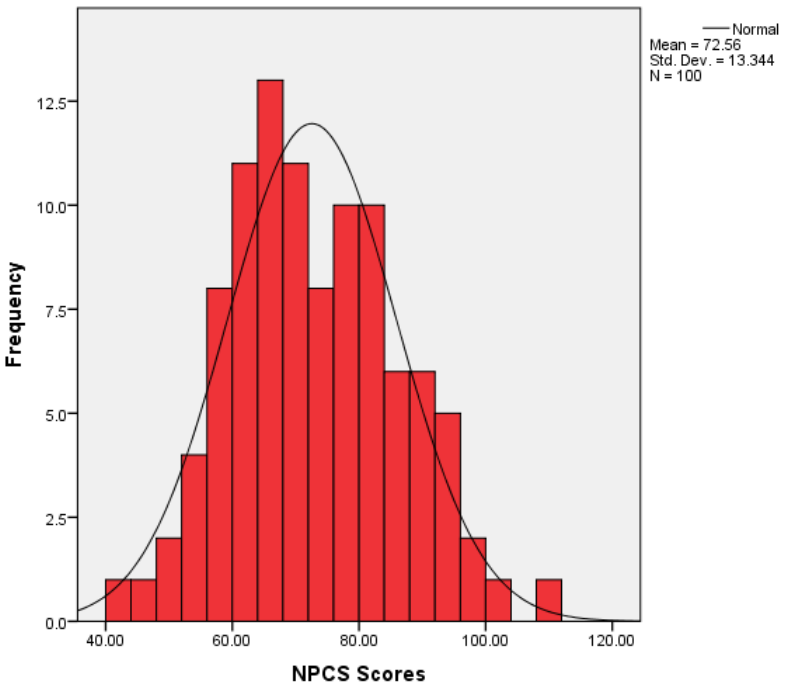
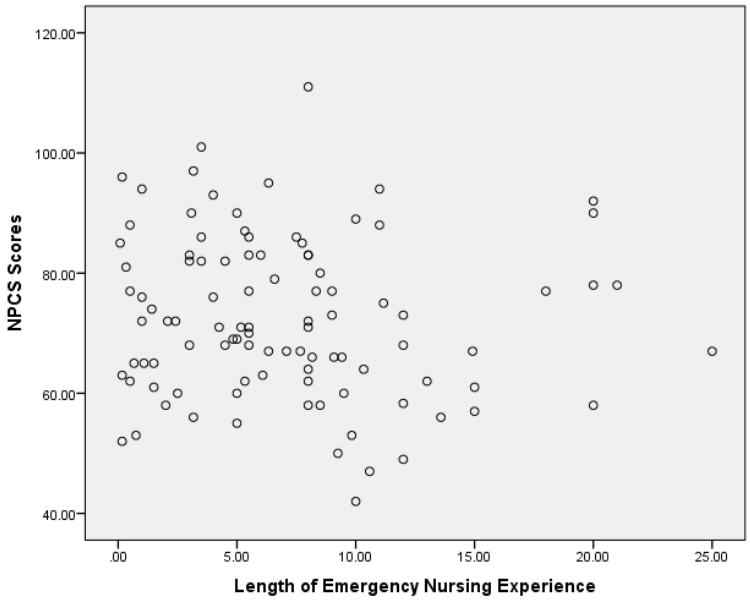


Figure 5.22 Scatterplot for Relationship between NPCS Scores and Participants' Length of Nursing Experience

Hypothesis 11: There is no relationship between perceived levels of Nurse/Physician collaboration and length of emergency nursing experience among emergency nurses.

Preliminary analysis of the data was performed to identify compliance with assumptions for parametric testing of the relationship. As discussed earlier the data on length of emergency nursing experience violates the assumption of normality. The scatterplot (Figure 5.23) for the data indicates violation of the assumptions of linearity and homoscedasticity for parametric testing. Therefore, the relationship between the variables was investigated using Spearman's Rank Order Correlation. There was a small negative relationship between participants' perceived level of Nurse/Physician collaboration and their length of emergency nursing experience that was not statistically significant [r=-0.140, n=100, p=0.166]. Based on this finding the null hypothesis cannot be rejected. It is important to remember that this negative relationship must be viewed in the context that a low score of NPCS indicates higher levels of Nurse/Physician collaboration.

Figure 5.23 Scatterplot for Relationship between NPCS Scores and Length of Emergency Nursing Experience



In summary, it is obvious that no relationship between the personal characteristics of the emergency nurse participants in this study and their perceived levels of Nurse/Physician Collaboration could be established. This, in essence, means that gender, age, education or nursing experience (both in general and specialist) do not appear to have any influence on the levels of Nurse/Physician collaboration among emergency nurses.

The next section of this Chapter examines the relationship between clinical autonomy and Nurse/Physician collaboration among emergency nurses. It also examines the influence of the organisation in which nurses work on their clinical autonomy and Nurse/Physician collaboration.

5.7 Relationship between Perceived Levels of Clinical Autonomy, Nurse/Physician Collaboration and Organisational Influence on Nursing

One of the main objectives of this study was to investigate the relationship between perceived levels of clinical autonomy and Nurse/Physician collaboration among emeregency nurses. The qualitative literature reviewed in Chapter 3 also suggested that the organisation in which nurses work may be related to the level of clinical autonomy among emergency nurses. This section addresses the objectives regarding the relationships between perceived levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses and the relationship that these concepts have with the perceived level of organisational influence on nursing practice.

The first hypothesis regarding the relationship between these concepts addresses the relationship between perceived levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses.

Hypothesis 12: There is no relationship between perceived levels of clinical autonomy and perceived levels of Nurse/Physician collaboration among emergency nurses.

Initial examination of the data in relation to this hypothesis revealed that the data for both variables were normally distributed (Figure 5.16 and Figure 5.21). A scatterplot was generated and examined to assess for linearity and homoscedasticity of the relationship between the variables. The data in relation to these variables appear not to violate the assumptions for parametric correlational testing of the hypothesis and therefore Pearson's Product Moment Correlation was

used to analyse the relationship between perceived levels of clinical autonomy and Nurse/Physician collaboration among the sample. There was a medium negative relationship (Cohen, 1988) between participants' perceived levels of clinical autonomy and Nurse/Physician collaboration that was statistically significant [r=-0.395, n=100, p<0.001]. This means that higher perceived levels of clinical autonomy are related to higher levels of Nurse/Physician collaboration. Based on this finding the null hypothesis can be rejected. Again, it is important to remember that this negative relationship must be viewed in the context that a low score of NPCS indicates higher levels of Nurse/Physician collaboration.

The NPCS is comprised of 3 subscales that have each demonstrated good reliability (*about sharing patient information* 0.816, *about decision-making process on the cure/care* 0.895, and, *about the relationship between nurse and physician* 0.828). Further analysis of the data was conducted to identify which, if any, of the subscales on NPCS indicate which element of Nurse/Physician collaboration had a stronger influence on the perceived levels of clinical autonomy among emergency nurses. The relationship between perceived levels of clinical autonomy among emergency nurses and each of the subscales of NPCS was assessed using Pearson's Product Moment Correlation. The strongest correlation was between perceived levels of clinical autonomy and the subscale *'about decision-making process on the cure/care'* (r=-0.355, n=100, p<0.001) followed by *'about sharing of patient information'* (r=-0.331, n=100, p<0.001) and finally the weakest correlation was with *'about the relationship between nurse and physician'* (r=-0.285, n=100, p<0.001). All correlations were medium in strength and statistically significant. The correlations between the subscales of the NPCS and the DPBS are summarised on table 5.5 below.

Table 5.5 Correlation between Perceived Levels of Clinical Autonomy and Subscales on NPCS

Scale	About Sharing of Patient Information	About the decision-making process on cure care	About the relationship between nurse and physician
Clinical Autonomy (DPBS)	-0.331	-0.355	-0.283
Sig (2-tailed)	<0.001	<0.001	<0.001

The relationship between perceived levels of clinical autonomy and the influence of the organisation on nursing was next examined

Hypothesis 13:There is no relationship between perceived levels of clinical autonomy and Organisational Influences on nursing practice among emergency nurses.

Prior to calculating the correlation between perceived levels of clinical autonomy among emergency nurses and the level of organisational influence on their practice the data for both variables were examined (Figure 5.16 and Figure 5.24). A scatterplot was generated to assess for linearity and homoscedasticity of the relationship between the variables (Figure 5.25). The data in relation to these variables appear not to violate the assumptions for parametric correlational testing of the hypothesis and therefore Pearson's Product Moment Correlation was used to analyse the relationship between perceived levels of clinical autonomy and Nurse/Physician collaboration. There was a medium positive relationship between participants' perceived levels of clinical autonomy and perceived Organisational

Influence on nursing practice [r=0.455, n=100, p<0.001]. This means that higher perceived levels of clinical autonomy are related to more positive organisational influence over nursing practice. Based on this finding the null hypothesis can be rejected.

Figure 5.24 Distribution of Scores on the Organisational Influences on Nursing Scale

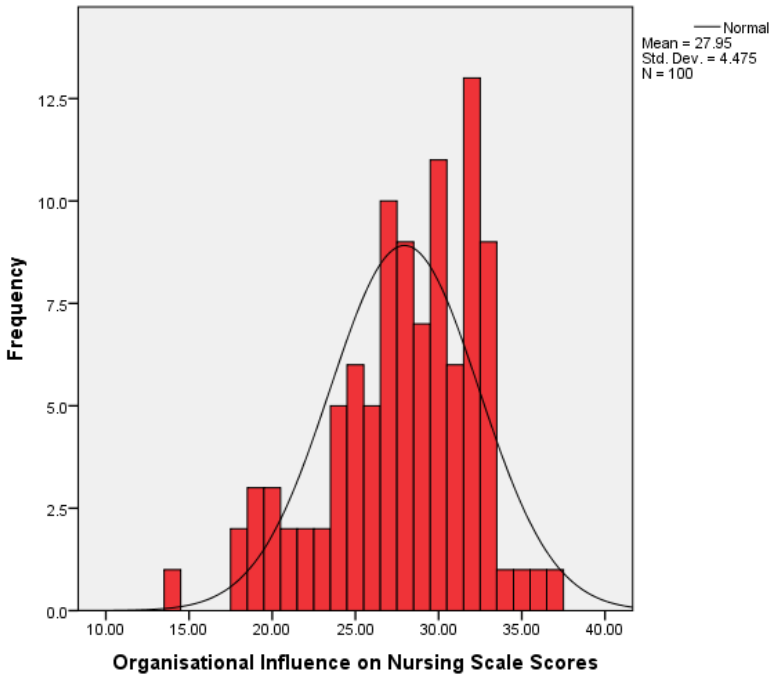
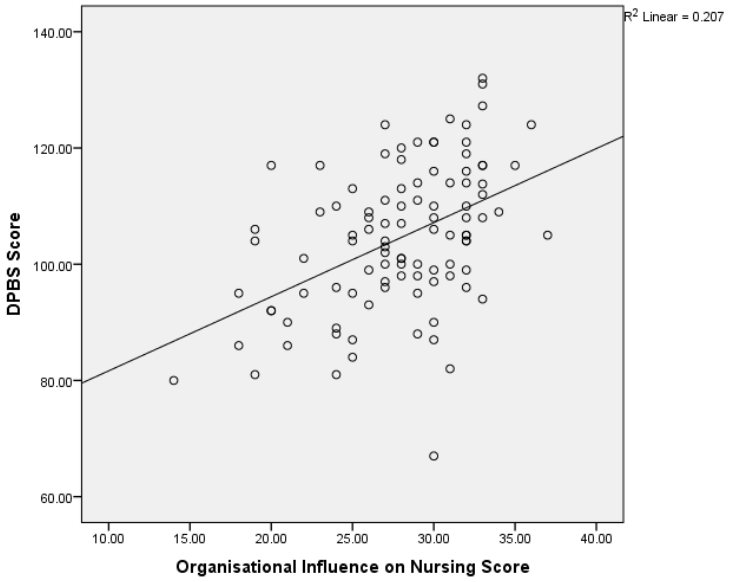


Figure 5.25 Scatterplot for Relationship between Perceived Level of Clinical Autonomy and Perceived Organisational Influence on Nursing



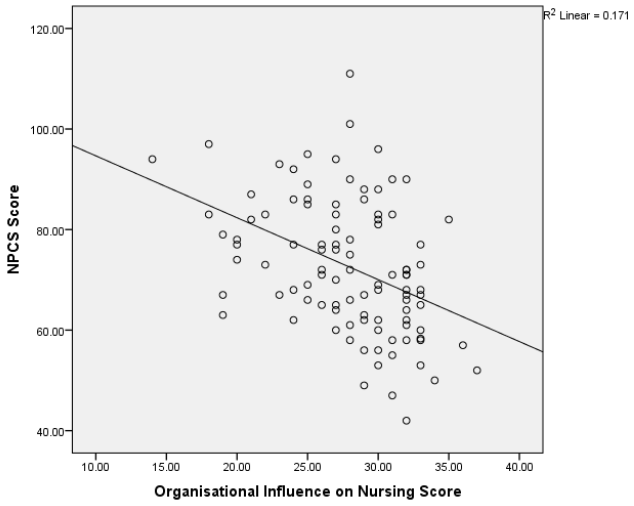
Finally, the relationship between perceived levels of Nurse/Physician collaboration and the level of Organisational Influence on nursing was examined.

Hypothesis 14: There is no relationship between perceived levels of Nurse/Physician collaboration and the perceived level of Organisational Influence among emergency nurses.

The data for perceived levels of Nurse/Physician collaboration and perceived organisational influence on nursing among emergency nurses were examined for violation of the assumptions for parametric testing. As previously identified the responses to the NPCS were normally distributed. The same was found for responses to the Organisational Influence on Nursing Scale (Figure 5.24). A scatterplot was generated to assess for linearity and homoscedasticity of the relationship between the variables (Figure 5.26). The relationship between the

variables was examined using Pearson's Product Moment Correlation. There was a medium negative relationship between participants' perceived levels of Nurse/Physician collaboration and perceived Organisational Influence on nursing practice [r=-0.413, n=100, p<0.001]. This means that higher perceived levels of Nurse/Physician collaboration are related to more positive organisational influence over nursing practice. Based on this finding the null hypothesis can be rejected.

Figure 5.26 Scatterplot for Relationship between Perceived Levels of Nurse/Physician Collaboration and Perceived Organisational Influence on Nursing among Emergency Nurses



The data was futher analysed to determine the relationship between the subscales on the NPCS and the Oganisational Influence on Nursing Scale. A summary of this analysis is given in Table 5.6 below.

Table 5.6 Correlation between Responses to Subscales on NPCS and the Organisational Influence on Nursing Scale

Scale	About Sharing of Patient Information	About the decision-making process on cure care	About the relationship between nurse and physician
Organisational Influence on Nursing Scale	-0.418	-0.333	-0.278
Sig (2-tailed)	<0.001	<0.001	<0.001

As this table demonstrates the strongest relationship is between respondents' scores on subscale *'about sharing patient information'* of the NPCS and the Organisational Influence on Nursing Scale ($r=-0.418$, $n=100$, $p<0.001$). However, all subscale responses had medium correlations with the Organisational Influence on Nursing Scale.

To summarise, this section examined the relationship between perceived levels of clinical autonomy, Nurse/Physician collaboration and Organisational Influence on nursing. The analysis of the relationship between these variables reveals that there are medium, statistically significant correlations between the variables. The correlation between clinical autonomy and Organisational Influence on nursing is positive where as the correlations with Nurse/Physician collaboration are negative. It must be remembered that a low score on the NPCS indicates higher levels of collaboration and though the correlations between the NPCS scores and the other variables in this section are negative they indicate that the relationship can be interpreted as positive i.e. higher levels of clinical autonomy are associated with high levels of Nurse/Physician collaboration and high levels of Nurse/Physician collaboration are associated with increased positive levels of organisational

influence on nursing. Therefore the null hypotheses regarding the relationship between these variables have all been rejected.

Summary

Personal Characteristics of Sample

There was a 70.9% response rate to this study with 100 emergency department staff nurses reponding to an invitation to participate in the study. The majority of participants in this study were female (87%). Participants were relatively young with a mean age of 35.57 years (SD=7.83). The youngest participant was 23 years of age with the oldest being 59 years old. All participants were registered as general nurses with only 14% of the sample holding registration on an additional division of the nurses' register. While none of the sample held registrations as nurses in intellectual disability of nurse prescribing of medicinal products 7% were also registered as midwives, 4% as childrens' nurses and 3% as psychiatric nurses.

The majority of participants were educated to undergraduate level only with 7% indicating that their highest level of qualification was Certificate level, 14% indicating Diploma level and 48% indicating Degree level. Post graduate level qualifications were held by 31% of participants, the majority of whom had obtained a Postgraduate Diploma (26%) while 5% of the sample had obtained a Masters Degree. In terms of specialist qualification, 40% of the sample indicated that they had obtained a specialist qualification in emergency nursing.

Distribution of responses about the length of participants' nursing experience was positively skewed indicating that the majority of participants had lower amounts of

nursing experience and while this ranged from 2 months 38 years the median length of experience was 10.17 years (IQR=9.44) among participants. There was a similar picture in terms of a positively skewed distribution for length of emergency nursing experience among participants. While the length of emergency nursing experience among participants varied from 1 month to 25 years the median length of experience was 6.04 years (IQR=6.37).

Organisational Influence on Nursing

One of the aims of this study was to measure the level of Organisational Influence on the practice of emergency nurses. The Organisational Influence in Nursing Scale, an 8 item scale that aims to determine the extent to which an organisation influences the practice of nurses, was developed for this study. The scale was found to have overall good reliability (Cronbach's alpha=0.797).

The mean score obtained for responses was 27.95 (SD=4.48) indicating a perception of quite positive influence by the organisation in which participants worked on their nursing practice.

Clinical Autonomy

The DPBS was used to collect data in relation to the perceived levels of clinical autonomy among participants in this study. The DPBS demonstrated good reliability in this study (Cronbach's alpha=0.86). The mean score for participants' responses to the DPBS was 104.54 (SD=12.53) indicating moderate levels of clinical autonomy. The lowest score from participants was 67, much lower than the next lowest score of 82. The highest score among participants was 132.

The relationship between perceived levels of clinical autonomy and the personal characteristics of participants were examined. An independent samples t-test examining the relationship between clinical autonomy and the gender of participants indicated that there was no statistically signicant difference between male (M=109.46, SD=12.01) and female (M=103.81, SD=12.50, t(98)=1.53, p=0.13) participants. The magnitude of this difference was also found to be very small (eta squared=0.023).

As the assumptions for parametric correlational testing of the relationship between levels of clinical autonomy and age of particpants were violated this relationship was examined using Spearman's Rank Order Correlation. There was a small positive but not statistically significant relationship between these variables [r=0.116, n=100, p=0.251].

Levels of education among participants were dichotomised into undergraduate and postgraduate levels of education. Independent samples t-test was used to examine the relationship between levels of clinical autonomy and levels of education among partticipants. There was no statistically significant difference between clinical autonomy among those with undergraduate education (M=104.70, SD=11.59) and postgraduate education (M=104.19, SD=14.60; t(98)=0.185, p=0.85). The relationship between clinical autonomy and education was further investigated in this study by examining the relationship with the completion of specific emergency nursing education by participants. An independent samples t-test on the variables revealed that there was no statistically significant difference between the levels of clinical autonomy among those who had achieved a specific emergency nursing qualification (M=105.74, SD=13.27) and those who had not (M=103.74,

SD=12.05; t(98)=0.783, p=0.606). The magnititude of this difference was extremely small (eta squared=0.006).

The relationship between levels of clinical autonomy among participants and their length of experience as both nurses and specifically emergency nurses was also examined. As the data violated the assumptions for parametric testing of these relationship Spearman's Rank Order Correlation was used to examine the relationship between levels of clinical autonomy and length of nursing experience. There was a small positive but statistically non significant relationship between levels of clinical autonomy and length of nursing experience [r=0.168, n=100, p=0.95]. There was no relationship between level of clinical autonomy and length of emergency nursing experience [r=0.072, n=100, p=0.479].

It is clear from the analyses of data that no statistically significant relationship between levels of clinical autonomy among participants and their personal characteristics could be found.

The influence of the organisation on the levels of clinical autonomy of participants was also investigated. As the data for this relationship did not violate the assumptions for parametric testing Pearson's Product Moment Correlation was used. A medium strength, positive relationship was found between level of clinical autonomy and organisational influence on nursing practice (r=0.455, n=100, p<0.001).

Nurse/Physician Collaboration

Nurse/Physician collaboration was measured using the NPCS which is a 27-item scale comprising of 3 subscales. The reliability of the scale overall was good with a

(Cronbach's alpha=0.918) as was the reliability of each of the subscales (*about sharing patient information* Cronbach's=0.816, *about decision-making process on the cure/care* Cronbach's=0.895, and, *about the relationship between nurse and physician* Cronbach's=0.828).

Participant scores on the scale overall ranged from 42 to 111 with a mean score for of 72.56 (SD 13.34) indicating moderate levels of collaboration between staff nurses and physicians in emergency departments. The strongest response to the subscales for the *'relationship between nurse and physician'* while the subscale related to the *'decision-making process on the cure/care'* scored the weakest.

The relationship between levels of Nurse/Physician collaboration and the personal characteristics of participants was investigated as part of this study. An independent samples t-test comparing the means between NPCS scores for male (M=73.00, SD=13.51) and female (M=72.50, SD=13.40), t(98)=0.126, p=0.90) participants were not statistically significant. The magnitude of the relationship between mean scores was extremely small (eta squared=0.0002).

The relationship between Nurse/Physician collaboration and education was also examined. An independent samples t-test examining the difference between Nurse/Physician collaboration mean scores for those with undergraduate level education (M=73.00, SD=14.02) and those with postgraduate education (M=71.58, SD=11.85); t(98)=0.492, p=0.62) demonstrated that there was no statistically significant difference between the groups. The magnitude of this difference was found to be extremely small (eta squared=0.002). Likewise, no statistically significant difference between participants who had completed specific emergency

nursing education (M=71.71, SD=13.68) and who had not (M=73.13, SD=13.20); t(98)=-0.521, p=0.603) was found.

The relationship between Nurse/Physician collaboration and length of nursing and specifically emergency nursing experience was also investigated. As the data violated the assumptions for parametric testing the relationship between NPCS scores and length of nursing experience was examined using Spearman's Rank Order Correlation and revealed that there was no relationship between the variables (r=-0.056, n=100, p=0.577). The same statistical approach was used to examine the relationship between NPCS scores and length of emergency nursing experience revealing a small negative but statistically no significant relationship between the variables (r=-0.140, n=100, p=0.166). (Low scores on NPCS indicate high levels of Nurse/Physician collaboration).

Therefore, no relationship between the personal characteristics of participants and their perceived levels of Nurse/Physician collaboration were found in this study.

This study also investigated the relationship between Nurse/Physician collaboration and Organisational Influence on the nursing practice of participants. As the data in for this relationship did not violate the assumptions for parametric testing Pearson's Product Moment Correlation was used. A medium strength, positive relationship was found between level of Nurse/Physician collaboration and organisational influence on nursing practice (r=-0.413, n=100, p<0.001). This indicates that there is a positive relationship between Nurse/Physician collaboration and Organisational Influence on nursing practice. The strongest relationship between scores on the Organisational Influence on Nursing Scale and the subscales of the NPCS was in relation to *'about sharing of patient information'* (r=-0.418, n=100, p<0.001),

followed by *'about the decision-making process on cure/care'* (r=-0.333, n=100, p<0.001) and then *'about the relationship between nurse and physician'* (r=-0.278, n=100, p<0.001).

Relationship Between Clinical Autonomy and Nurse/Physician Collaboration

The relationship between levels of clinical autonomy and levels of Nurse/Physician collaboration was examined in this study using Pearson's Product Moment Correlation There was a medium strength negative relationship between participants' perceived levels of clinical autonomy and Nurse/Physician collaboration that was statistically significant [r=-0.395, n=100, p<0.001]. This means that higher perceived levels of clinical autonomy are related to higher levels of Nurse/Physician collaboration.

The relationship between levels of clinical autonomy and scores on each of the subscales on the NPCS was also investigated. The strongest correlation was between perceived levels of clinical autonomy and the subscale *'about decision-making process on the cure/care'* (r=-0.355, n=100, p<0.001) followed by *'about sharing of patient information'* (r=-0.331, n=100, p<0.001) and finally the weakest correlation was with *'about the relationship between nurse and physician'* (r=-0.285, n=100, p<0.001). All correlations were of medium strength and found to be statistically significant.

The findings from this study are discussed in Chapter 6.

Chapter 6

Discussion of Findings

Introduction

In this chapter the findings from this study are discussed in the context of the literature reviewed in the first three chapters of this thesis, specifically in relation to the theoretical and empirical literature on autonomy and autonomy in nursing and the theoretical and empirical literature on Nurse/Physician collaboration. This chapter also includes a conclusion to the thesis. In concluding the thesis a number of study strengths and limitations are identified with a number of recommendations for practice and further research proposed.

6.1 Characteristics of Study Participants

This study focused on staff nurses working in Emergency Departments (ED) in Ireland. The sample was drawn from this grade of nurse only as it is this group who provide the majority of direct patient care in the departments and represent approximately 70% of the total ED nursing workforce in Ireland (The National Emergency Medicine Programme, 2012). In the literature reviewed this group were found to have lower levels of autonomy in practice than nurses working in other clinical areas (Adriaenssens, et al., 2010) and at different practice levels within the ED setting (Browning, at al., 2007). One hundred and forty one staff nurses working in EDs in the south of Ireland were invited to participate in the study with 100 participants returning completed questionnaires. Based on the findings of a review of ED staffing by the National Emergency Medicine Programme (2012) the

number of respondents to this study represents almost 1 in 8 (12.14%) of all staff nurses employed in EDs in Ireland.

Gender

The vast majority of participants were female (87%) which is reflective of the nursing population in general and not dissimilar to other studies (Hayhurst, et al., 2005; Thomson, 2007; Sterchi, 2007; Hughes and Fitzpatrick, 2010; and Nair, et al., 2012). However, according to statistics on the nursing population in Ireland from An Bord Altranais agus Cnaimhseachais for 2011, 7.75% of the registered nursing population in Ireland are male as opposed to 92.25% female. This study demonstrates that there were more males, double (13%) the general national nursing population distribution, working in the EDs included in this study. This suggests that males in nursing are attracted to working in EDs in greater numbers than in other areas of practice.

Age

The age profile of participants in this study indicates that while the age of participants ranged from 23 years up to 59 years the sample was relatively young with a mean age of 35.57 years (SD=7.83). Indeed, an examination of the boxplot for this result (figure 5.1) indicates that 75% of the sample were under 40 years of age. While statistics on the age of nurses working in Ireland are difficult to ascertain it is useful to see how the findings from this study compare with the age profile of nurses from other similar countries.

In a study to profile the demographics of nurses working in Australia Turner et al. (2009) established that the average age of nurses in that country was 43.5 years

which is 8 years older than the mean age of the cohort in this study. Further examination of Turner et al.'s (2009) findings reveals that only 35% of their national cohort were under 40 years of age. Statistics provided by the Nursing and Midwifery Council (NMC) in the United Kingdom for 2008 reveal a similar picture to Australia. According to their statistics 34.6% of nurses registered to practice in the United Kingdom in 2008 were under 40 years of age (NMC, 2008). Based on these comparisions it is clear that emergency nursing attracts a younger cohort of nurses than some other areas of practice. The fact that emergency staff nurses appear to be quite young when compared to the age profile of nurses generally may also indicate that nurses leave this area of practice at a younger age. The reason for such a young profile of nurses working in EDs warrants further investigation, particularly the reasons around why older nurses appear not to remain working in this area of practice.

Registration/Qualifications

This study found that all participants were registered on the General Division of Nurses with An Bord Altranais agus Cnaimhseachais. While general nurse education gives an overview of some of the individual specialist areas in nursing, such as children's nursing, mental health nursing and midwifery, it does not provide specialist indepth knowledge in these areas. Of note in this study is that only 14% of participants were registered on an additional division of the nurses' register. According to the Emergency Medicine Programme (2012), EDs receive and deal with patients with undifferentiated emergency care needs across all healthcare specialties and across the full spectrum of ages. It is, therefore, relevant to identify what specialist registrations emergency staff nurses possessed to assist

in offering a specialist perspective in caring for patients with population specific care needs.

All of the EDs included in this study were mixed departments meaning that they accepted both adult and child patients. According to the Report of the Emergency Medicine Programme (2012), attendances at mixed EDs typically include 20-25% children. However, only 4% of participants in this study posessed an additional registration as a children's nurse. There must then follow a question on the readiness of those departments to deal with children. According to Snow (2013) readiness to accept and deal with children with emergency care needs implies adequate education of nursing staff. Grant and Crouch (2011) recognise that there is a lack of registered children's nurses in EDs that provide care for both adults and children. To this end they suggest that mixed EDs should have a lead paediatric nurse to assist adult trained nurses provide care for children (Grant and Crouch, 2011). In the absence of nurses with a specialist registration as children's nurses an evaluation of the education of nurses working in EDs needs to take place to identify if emergency nurses are being prepared for this population. This issue is also highlighted by Grant and Crouch (2011) who advocate for supplementary education for nurses who are not registered as children's nurses but provide care for children in a mixed ED.

Similarly, regarding the specialist area of mental health, only 3% of participants possessed an additional registration as a psychiatric nurse. This is despite patients with mental health emergencies attending for care at EDs in Ireland. According to the National Suicide Research Foundation there were 11,966 attendances at EDs with deliberate self-harm in 2010 (National Suicide Research Foundation, 2011). This number represented a 4% increase in attendances with deliberate self harm

from the previous year demonstrating that patients presenting with deliberate self harm represent a growing cohort of patients in EDs. These figures do not account for patients attending with other mental health issues such as delerium, depression or substance misuse and therefore indicate that the issue of care for patients with mental health care needs may not be best served by nurses who possess appropriate specialist qualifications in EDs in Ireland. While those with specialist qualifications may choose to work in those specialist areas there remains a need to provide care for those, often vulnerable, patients by appropriately educated staff. While it is beyond the scope of this study to analyse or comment on the content of specialist emergency nursing programmes, the learning needs of nurses in relation to these specific groups of patients needs to be assessed and addressed. Indeed, Kelleher and Cotter (2009) found that in terms of ED nurses' knowledge around substance use and users the majority of participants (73%) in their study indicated that they had not received any education regarding substance use. This is supported by McPeake, O'Neill and Kinsella (2013) who attribute the lack of recognition and management of alcohol abuse in EDs to a lack of competence among ED staff.

From the broader mental health emergency care perspective Sivakumar, et al., (2011) conducted a national survey of the mental health related learning needs of clinicians (physicians and nurses) working in Australian EDs. An instrument to measure confidence and knowledge about mental health problems in ED was developed by the researchers and displayed good reliability in the study (individual section Cronbach's ranged from 0.79 and 0.91). A total of 109 nurses responded to the survey and while the majority of participants reported having emergency nursing qualifications (no specific quantity reported) only one nurse participant possessed a specialist mental health nursing qualification. Of relevance to this

study were the findings that 66.1% of nurses considered patients who presented with mental health problems such as personality disorder, psychosis, or behavioural conditions to be problematic. Additionally Sivakumar, et al., (2011) found from analysis of the responses to the free text open section at the end of the survey that nurses reported knowledge deficits around issues such as determining careplans, conducting mental health examinations, assessing risk of self harm, pharmacology for treatment of chemical restraint and alcohol and substance intoxication. Again, this highlights the need for further investigation in an Irish context, and in the absence of a critical mass of specialist trained mental health nurses working in EDs, of the knowledge and need for education around the area of mental health among emergency nurses.

In 2005 the then Minister for Health in Ireland, Minister Mary Harney, identified the introduction of nurse prescribing of medicinal products as a priority. Following legislative change and educational provision nurse prescribing of medicinal products was introduced in 2007 (Department of Health and Children, et al., 2007). This initiative is not restricted to specialist or advanced practice nurses and is open to all nurses who meet certain criteria. The ability to prescribe medication for patients as a nurse is contingent on being registered to do so. Interestingly, none of the staff nurses who participated in this study were registered to prescribe medicinal products. The aim of nurse prescribing of medicinal products is to improve patients' access to medication when needed. The lack of uptake and utilisation of this initative among the emergency staff nursing population needs to be investigated further. As will be discussed later, this cohort of staff nurses were relatively well educated with the majority of participants posessing a Bachelor's Degree or higher. The usefulness of the initiative in the ED setting may be

questioned due to the fact that medical staff are always present in the ED and therefore patient access to medication may not be an issue.

In terms of the specialty nurse registrations held by the sample in this study and the knowledge and ability of emergency nurses to respond to the care needs of patients, especially with mental health health needs or indeed children there is a need to examine the competence and education of emergency nurses in these situations. While McCarthy, et al. (2013) examined the procedures performed by emergency nurses, and their perceived competence in performing those procedures, they appear not to have examined competence in dealing with wider population groups. This needs further examination to determine the effectiveness of current education and the need for future education to focus on wider issues relating to particular populations attending emergency departments for care. There also needs to be an evaluation to determine if the skills of nurses with specialty registrations are being utilised appropriately in the EDs where they work.

Education

At the staff nurse level participants in this study were well educated. Post graduate qualifications were held by 31% of the sample which was less than those with postgraduate qualifications in McCarthy, et al.'s (2013) study (55%). A Masters Degree had been obtained by 5% of nurses in this study as opposed to 7.5% in McCarthy, et al.'s (2013) study and noteably 47% were reported to have obtained Postgraduate Diplomas in Emergency Nursing in McCarthy, et al.'s (2013) study as opposed to 26% with Postgraduate Diploma level education in this study. One participant in McCarthy, et al.'s (2013) study had obtained a PhD with no participants in this study having reached that level of education. However, it must

be noted that the sample used in McCarthy et al.'s (2013) study included Clinical Nurse Managers (22%) and Advanced Nurse Practitioners (ANPs) (5%). These grades were not included in this study which focused on staff nurses and this may explain the difference between the postgraduate qualifications among samples in both studies. Participants with higher qualifications may be attracted into more senior posts such as Clinical Nurse Managers or ANPs. Indeed, registration as an ANP in Ireland is dependent on achieving a Masters level qualification and the inclusion of this group in McCarthy et al.'s (2013) study would account for at least 5% of their sample having a Masters Degree. While McCarthy, et al. (2013) report that 47% of their sample held a Postgraduate Diploma in Emergency Nursing, 40% of the sample in this study reported having achieved a specialist emergency nursing qualification. For some this qualification may not be at Postgraduate Diploma level and may have been obtained in situations other than academic settings such as hospital certificates and nursing board approved programmes.

As discussed earlier, the sample in this study were relatively young. This is further reflected in the fact that only 7% of participants indicated that their highest level of qualification was at hospital certificate level. This was the traditional education mode for nurses in Ireland up to 1996 when a University based Diploma in Nursing was introduced as a pilot at National University of Ireland, Galway (University of Southampton, 1998). Indeed 12 other sites in Ireland introduced this programme in 1996 with the remaining 5 nurse education sites in Ireland moving to a Diploma in Nursing in 1997 (University of Southhampton, 1998). The Diploma in Nursing as the pre-registration level of education for nurses ended in 2002 with the introduction of the Bachelors Degree in Nursing across Ireland with nursing becoming a graduate profession (Department of Health, 2012). The fact that 79%

of the sample possess a Bachelors Degree or higher indicates that many were educated after 2002 while some may have obtained their Bachelors Degree following registration with a lower level of qualification. This finding is supported by the fact that 75% of the sample were less than 40 years of age.

Of note is the fact that 40% of participant staff nurses in this study indicated that they had achieved a specific emergency nursing qualification. Therefore the majority of staff nurses working in EDs have not completed specialty education in emergency nursing. When taken with the proportion of participants who were registered in additional specialty divisions of the nurses' register (discussed earlier in this chapter) there appears to be an educational deficit among this cohort of nurses in terms of obtaining the skills and knowledge for such a diverse practice area (Emergency Medicine Programme, 2012). While McCarthy, et al. (2013) suggested that nurses working in EDs in Ireland perceive themselves to have good competence in areas of practice that are considered at an advanced level, the sample included both ANPs and Clinical Nurse Managers who constituted over quarter of the sample (27%) in their study. This study provides a profile of the age, registrations, education level, qualifications and experience level of staff nurses who are the majority grade of nurses working in EDs in Ireland (Emergency Medicine Programme, 2012) and therefore provide the majority of direct patient care by nurses in the ED. What this study demonstrates is that when compared with findings from recent research involving emergency nurses in Ireland with other grades of nurse removed, staff nurses are a young cohort (75% under 40 years of age), with few having additional specialty registrations (14%) such as Registered Children's Nurse (4%), Registered Psychiatric Nurse (3%), Registered Nurse Prescriber (0%) and more than half (60%) not having completed emergency

nursing specialty education. The findings of this study related to the profile of staff nurses working in ED draw attention to such issues as quality of the service provided in EDs, level of supervision required for inexperienced nurses without specialty qualifications and the reasons why nurses working in EDs appear to be younger than the nursing population in general and require further investigation beyond what was possible in this study.

Length of Experience

Participants in this study were asked to indicate the length of their experience as a nurse as well as the length of their experience as a nurse working in ED. This study found that participant staff nurses worked in nursing for between 2 months and 38 years with a median length of experience of 10.17 years (IQR=9.44) (distribution positively skewed). Participant staff nurses indicated that they had between 1 month and 25 years emergency nursing experience with a median length of experience of 6.04 years (IQR=6.37) (distribution positively skewed). These findings indicate that for the most part staff nurses working in EDs have relatively little experience working as nurses and subsequently working in ED. The distribution of values for respondents to both questions regarding length of nursing experience and length of emergency nursing experience were positively skewed. This indicates that while there were nurses with significant nursing experience (up to 38 years) and significant emergency nursing experience (up to 25 years) the majority of respondent nurses had far less. The length of emergency nursing experience of participants in this study (median=6.04 years) is almost identical to that found by Sawatzky and Enns (2012) in their Canadian study of emergency nurses (median=6.00 years) This finding raises a number of issues regarding staff nurses working in ED.

The fact that the majority of staff nurses have little nursing or emergency nursing experience raises the question of retention of nurses in this specialty. There is a recognition in the international literature that retention of nurses in EDs throughout the world is a problem (Robinson, Jagim and Ray, 2005; Jackson, 2006; Morphet, Considine and McKenna, 2011; and Sawatzky and Enns, 2012). Of interest to this study is the finding from a study by Sawatzky and Enns (2012) who sought to explore the issues that affects the retention of nurses working in EDs in Canada. Sawatzky and Enns (2012) collected data as part of a larger study involving 261 ED nurses working in 12 EDs in Canada finding that 26% of nurses had stated that they predicted they would leave their job within the following year. The key predictor of intention to leave their posts was found to be 'engagement' in the workplace specifically by nursing management, collaboration with physicians and staffing and resources. The inclusion of nursing staff in decision-making was found to be one of the key features of EDs with a nurse retention rate of more than 90% in a study of 101 EDs in the USA (Jackson, 2006). Indeed, Robinson, Jagim and Ray (2005) suggest that among the strategies to improve nurse retention in EDs are involvement of nurses in decision-making and encouragement of collaboration between nurses and physicians. Indeed, others have found a relationship between levels of autonomy among nurses and their retention (Hayhurst, et al., 2005; and Mosely and Peterson, 2008).

The low levels of experience of nurses at the staff nurse level working in EDs in this study warrants further investigation, particularly in the context of their levels of collaboration with physicians and level of autonomy in the workplace. While this study did not aim to investigate a relationship between retention of nurses in EDs and their level of clinical autonomy and the levels of collaboration between

nurses and physicians it has found that this cohort of nurses appear to be younger than the general nursing population and have low levels of experience. Future research is needed to examine the effect of clinical autonomy and Nurse/Physician collaboration on other elements of nursing practice such as retention among emergency nurses.

6.2 Level of Clinical Autonomy

The level of clinical autonomy among participant staff nurses working in EDs was measured using the Dempster Practice Behaviours Scalse (DPBS) (Dempster, 1990). This study appears to be the first to use this instrument in an Irish context with most studies using the instrument to measure autonomy in the practice of nurses working at an advanced level (Ulrich, Soeken and Miller, 2003; Cajulis and Fitzpatrick, 2007; Bahdori and Fitzpatrick, 2009; and Maylone, et al, 2010). It was reassuring, therefore to find that the instrument demonstrated good reliability (Cronbach's alpha 0.86) among staff nurses working in Irish EDs.

Mean Clinical Autonomy Score

The mean DPBS score for participants in this study was 104.54 (SD=12.53). With a possible range of scores from 30 to 150 the mean score of participants in this study appears, when compared with other studies, to represent a moderate level of clinical autonomy among staff nurses woring in EDs in Ireland. While other studies have commented that staff nurses appear to have moderate levels of autonomy in their practice (Papathanassoglou, et al., 2005; and Iliopoulo and While, 2010) it is difficult to draw comparison with the findings from this study as the studies used different instruments to measure the level of autonomy in nurses' practice. However, a number of studies reviewed in Chapter 2 used the DPBS to measure

autonomy in their studies and therefore it is useful to compare the findings from this study with the findings from those studies.

Four studies reviewed used the DPBS to measure autonomy in the practice of advanced practice nurses. The researchers in these studies, all conducted in the USA, indicated that participants displayed high levels of autonomy in their clinical practice. Mean scores of 124.20 (SD=14.3) (Ulrich, Soeken and Miller, 2003), 117.37 (Cajulis and Fitzpatrick (2007), 127.19 (SD= 4.45) (Bahadori and Fitzpatrick, 2009) and 123 (SD=12.7) (Maylone, et al., 2010) were viewed as indicating high levels of clinical autonomy in these studies. The mean clinical autonomy score in this study was 104.54 (SD=12.53) which is considerably lower than the mean scores in the studies reviewed. This indicates that there is an apparent difference in the clinical autonomy scores of advanced practice nurses and staff nurses. From a practical point of view it confirms that advanced nurse practitioners practice with greater clinical autonomy (National Council for the Professional Development of Nursing and Midwifery, 2007) than other grades of nurses. While emergency nurses perceived that they had high levels of competence in terms of practical clinical skills, some considered at advanced practice level (McCarthy, et al., 2013), it is clear that as staff nurses they do not have the level of clinical autonomy to employ those skills based on their own decision to do so.

Chapter one of this thesis discusses the divergence in views regarding the understanding of autonomy in nursing (An Bord Altranais, 1999; Keenan, 1999; McParland, et al., 2000; Kramer, Schmalenberg and Maguire, 2006; Seago, 2006; Weston, 2006; Lewis, 2006). The findings from this study supports the fact that levels of clinical autonomy is not self-determined and are based on practice level of the individual nurse and the privilages associated with that level. There are

accepted boundaries around the level of practice afforded to staff nurses and the level of autonomy in the clinical practice of nurses at an advanced level (Advanced Nurse Practitioners). When the findings of this study, in terms of level of clinical autonomy, are compared with findings from studies examining nurses practicing at an advanced level it is evident that staff nurses do not have the same level of autonomy in their clinical practice as advanced nurse practitioners who are enabled to practice with more autonomy by their regulatory body (National Council for the Professional Development of Nursing and Midwifery, 2007). Indeed, the notion gleaned from the review of the theoretical literature in chapter 1 that a definition of autonomy in nursing should espouse a freedom to practice within accepted boundaries for that profession appear supported when the findings of this study are taken in the context of findings from other studies (Ulrich, Soeken and Miller, 2003; Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick, 2009; and Maylone, et al., 2010).

6.3 Level of Nurse/Physician Collaboration

The level of Nurse/Physician collaboration among emergency nurses in this study was measured using the Nurse Physician Collaboration Scale (NPCS) (Ushiro, 2009). This instrument was developed in Japan but has already been used in the USA (Nair, et al., 2012) demonstrating good reliability in that study (Cronbach's alpha=0.85). The NPCS was chosen for this study as it measures behaviours in practice reflecting Nurse/Physician collaboration rather than attitudes towards Nurse/Physician collaboration (e.g. *'Jefferson Scale of Attitudes toward Physician-Nurse Collaboration').* The NPCS demonstrated good reliability in this study on

emergency staff nurses in Ireland (Cronbach's alpha=0.918) as did the individual subscales on the instrument (*about sharing patient information*: 0.82; *about decision-making process on the cure/care*: 0.90; *about the relationship between nurse and physician*: 0.83). This study demonstrates that the NPCS is a reliable instrument in terms of measuring Nurse/Physician collaboration in an Irish context.

Mean Nurse Physician Collaboration Score

The mean NPCS score for participants in this study was 72.56 (SD=13.34). It is difficult to determine the strength of this score as Ushiro (2009) does not indicate how to interpret these findings. In the context of the overall possible scores ranging from 27 to 135 the mean score in this study of 72.56 does not indicate strong levels of Nurse/Physician collaboration among staff nurses working in EDs in Ireland. Nair, et al. (2012) used the NPCS (Ushiro, 2009) to compare the frequency of nurse/physician collaborative behaviours in an acute care hospital in the USA. While they reported mean item score for the NPCS rather than mean total scale score (and total mean subscale scores) Nair, et al. (2012) did not comment on the strength of the scores in their study. Total scale score and total subscale scores for the NPCS were calculated in this study. However, mean item scores were also calculated and presented in figure 5.12.

The strongest subscale score reported by participants in this study was in relation to the *relationship between nurses and physicians* which differed from that in Nair, et al.'s (2012) study who reported sharing information as the strongest score among nurses. One rationale for the fact that nurses identify the relationship with physicians as strongest may be because the ED is an area where physicians are constantly present at all times of the day. This close proximity in terms of the

working together may lead to a familiarity between the professions that may not exist in units where physicians visit less frequently. Interestingly, *decision-making on the process on the cure-care* of patients resulted in a lower score than the other two subscales. Again, this may be as a result of physicians being constantly present in the ED. It may be expected that clinical information from nurses who work without the presence of physicians in the clinical area on a constant basis is essential in terms of informing the clinical decision-making of both nurses and physicians. Where physicians are constantly in contact with their patients, e.g. the ED, there may not be such a dependence on information from nurses. This may explain why this subscale scored stronger in Nair, et al.'s (2012) study. Future research may examine the issue of the presence of physicians in the clinical area and its relationship with Nurse/Physician collaboration.

6.4 Organisational Influence on Nursing

One of the issues raised in the review of the literature was the influence of the organisation on the practice of nurses, particularly in relation to nurses' autonomy in clinical practice (Kramer and Schmalenberg, 2003; Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004; Attree, 2005; Norris and Melby, 2006; Kramer et al., 2007; Plager and Conger, 2007; Cajulis and Fitzpatrick, 2007 and Gagnon, et al., 2010). Based on the literature reviewed as part of this study a new instrument, 'Organisational Influences on Nursing Scale', was developed to measure the influence of the organisation on nursing practice. The development of this instrument is described in detail in Chapter 4. While this is a new instrument, used for the first time in this study, it did display good reliability (Cronbach's alpha =

0.797). In terms of the development of the instrument it also displayed good content validity with a S-CVI of 0.98. While the instrument has displayed sufficient reliability and validity in its debut in this study further work is needed to assess the reliability of the instrument. The use of the instrument in other practice areas of nursing would not only help establish the reliability of the instrument across nursing settings but also provide comparison between practice areas. In terms of further establishing the reliability of the instrument, test-retest reliability needs to be assessed (Polit and Beck, 2006). This was not possible in this study and will be considered in any future research using the 'Organisational Influence on Nursing Scale'. Item 7 on the instrument *'....has too many policies, procedures and routines involved in patient care'* appears to affect the reliability of the instrument as a whole with an apparent improvement in the Cronbach's alpha of the intrument if this item were deleted (from 0.797 to 0.840). All analysis conducted in this study included this item but, while its inclusion in the instrumet is based on the literature reviewed (Kramer and Schmalenberg, 2003; and Stewart, Stansfield and Tapp, 2004), consideration needs to be given to removing this item from the instrument in future studies. The removal of the item must be taken in the context of the item achieving a CVI score of 1.00 from the review panel (appendix VII). Two experts have suggested that in hindsight the removal of the word 'routines' from this item may change how it is perceived and may improve the inter-item reliability of this item.

Mean Organisational Influence on Nursing Score

The mean score on the Organisational Influence on Nursing Scale for participants in the study was 27.95 (SD=4.48; possible range 8-40). As this was the first study to use this instrument there are no data from other groups of nurses with which to

compare the findings. It appears that respondents indicated that the organisations in which they worked were somewhat positive in their influence over their practice but the magnitude of this is difficult to determine. The utility of the data in this study, however, is in assessing the relationship between the levels of clinical autonomy and Nurse/Physician collaboration and the Organisational Influence on Nursing Practice of emergency nurses. This relationship is discussed in the subsequent sections of this chapter.

6.5 Relationship Between Sample Characteristics and Level of Clinical Autonomy

The influence of the personal characteristics of the sample on their levels of clinical autonomy was examined in this study. It is clear from this study that gender, age, education, experience both as a nurse and as an emergency nurse have no influence on the levels of clinical autonomy. Strategies proposed to increase the practice level of nurses involved in patient care, particularly in EDs, include education and skills development (Reconfiguration Forum for Cork and Kerry, 2009; and The National Emergency Medicine Programme, 2012). This study demonstrates that this approach will have no effect on the level of clinical autonomy among emergency nurses in Ireland. Indeed, it has already been demonstrated that emergency nurses have high levels of competence in a number of advanced skills (The National Emergency Medicine Programme, 2012; and McCarthy, et al., 2013). The null hypothesis proposed in this study that stated that there was no relationship between the level of education and the level of clinical autonomy among emergency nurses could not be rejected. Nor could the null hypothesis that

stated that there was no relationship between levels of clinical autonomy among emergency nurses and whether they have completed specific emergency education be rejected. While skills and education are important in carrying out emergency nursing care in such a diverse setting, and in particular in caring for specific populations (Kelleher and Cotter, 2009; Sivakumar, et al., 2011; Grant and Crouch, 2012; and Snow, 2013) they do not appear to have any influence on the overall clinical autonomy of emergency staff nurses. Education and skills provide the means for nurses to care for their patients but does not give them the authority to do so. This finding is particularly interesting in terms of nursing becoming a graduate profession in Ireland (Department of Health, 2012). It is also interesting in terms of the proportion of emergency nurses with specialist emergency nursing qualifications (40%). The realisation of the potential of the nursing profession in expanding practice to respond to the challenges of modern healthcare provision requires new knowledge and skills for the profession. However, to realise the potential of the past and continued effort in terms of education and skills acquisition among ED staff nurses it appears the focus needs to shift from education and skills development alone towards strategies that enable nurses to use and apply the knowledge and skills gained from their education.

Indeed none of the null hypotheses offered relating to the relationship between the sample characteristics and levels of clinical autonomy among emergency nurses could be rejected in this study. It is clear from this study that age, education and experience of emergency nurses have no influence over the levels of clinical autonomy of emergency nurses. When the antecedents to clinical autonomy proposed in Chapter 1 are considered, it is clear that nurses need to have attained and maintained nursing knowledge and skill and must have the knowledge and

skills to develop their own tacit knowledge (Wilkinson 1997). While experience and education may be needed to practice autonomously they in themselves do no appear to influence the level of clinical autonomy among emergency nurses. Indeed, among the attributes of clinical autonomy in nursing proposed in Chapter 1 is "makes decisions which are based on professional judgement and is able to act on these within his her own sphere of practice" (Wilkinson, 1997; pg. 704). Education and experience may create the competence for nurses to practice beyond their current scope of practice but while that knowledge and those skills apply to practice beyond the defined and enabled sphere of practice for emergency nurses then they will not be able to demonstrate autonomy in these areas of emergency care.

6.6 Relationship Between Level of Clinical Autonomy and Level of Nurse/Physician Collaboration

There is evidence in the literature reviewed that there may be a positive relationship between levels of autonomy in clinical practice among emergency nurses and the strength of the relationship between nurses and physicians (Deschario-Marino, et al., 2001; Hinno, et al., 2009; Gagnon, et al., 2010; Maylone, et al., 2010; and Papathanassoglou, et al., 2012). This study found that Nurse/Physician collaboration had a positive influence on the levels of clinical autonomy among emergency nurses that was statististically significant [$r=-0.395$, $n=100$, $p<0.001$]. This finding supports the belief that autonomy is context based in nursing practice involving interaction with a wider society including other healthcare professions (MacDonald, 2002; Weston, 2009; and Iliopoulou and

While, 2010). In terms of enhancing the role and involvement of the nurse in emergency care delivery this study indicates that strategies need to include approaches involving enhancement of the nurse/physician relationship. Calls for an enhanced role for nurses in healthcare delivery (Department of Health and Children, 2011) and indeed in the delivery of ED care (The National Emergency Medicine Programme, 2012) need to recognise the significance of building strong nurse/physician relationships within ED care specifically, and healthcare in general, in Ireland. While the subscales on the NPCS all demonstrated statistically significant relationships with clinical autonomy among emergency nurses, the strongest correlation was with *'about decision-making process on cure/care'* ($r=-0.331$, $n=100$, $p<0.001$). This finding demonstrates that involving emergency nurses in the decision-making about patient care increases their clinical autonomy in delivering care. In terms of delivering care overall this finding also highlights the interdependence of the multidisciplinary team (Weston, 2006) congruent with a modern understanding of autonomy (Kramer, et al., 2006; Weston, 2008; and Neuhouser, 2011). Strategies that focus on education to deliver an increased involvement of nurses in emergency care delivery will not influence the clinical decision-making of nurses in terms of autonomy in care delivery. This study has demonstrated that, certainly in terms of influencing the clinical autonomy of emergency nurses, approaches aimed at increasing nurses' clinical autonomy need to include a focus on the nature and strength of Nurse/Physician collaboration. Specifically, there needs to be an approach to increasing the involvement of nurses in clinical decision-making, enhanced sharing of clinical information between nurses and physicians and a focus on enhancing the relationship between the disciplines (Ushiro, 2009).

6.7 Relationship Between Level of Clinical Autonomy and Level of Organisational Influence on Nursing

The role of the organisation in which nurses work in terms of sanctioning, facilitating and supporting the autonomy of nurses emerged from the literature reviewed as a significant issue requiring investigation (Kramer and Schmalenberg, 2003; Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004; Papathanassoglou, et al., 2005; Attree, 2005; Kaplan, et al., 2006; Kramer, et al., 2007; Plager and Conger, 2007; and Gagnon, et al., 2010) and was measured using the Organisational Influence on Nursing Scale, developed as part of this study.

There was a positive correlation between the level of clinical autonomy and the level of Organisational Influence among emergency nurses who participated in this study [$r=0.455$, $n=100$, $p<0.001$]. This finding indicates that a more positive influence from the organisation in which emergency nurses work leads to a higher level of clinical autonomy among those nurses. This supports the importance of the role of individual organisations in realising the clinical potential of nurses. Indeed, this finding is supported by findings from Hinno, et al. (2009) who found that nurses who reported less organisational support also reported lower levels of autonomy.

Strategies aimed at increasing the involvement of nurses in healthcare delivery in response to the ever evolving challenges in healthcare delivery need to be aware of the importance of the role of the organisation in realising the potential for nursing to respond to those challenges. Quite often strategies espouse the need for increased education among nurses to respond to the challenges of modern healthcare delivery (Department of Health and Children, 2003; Reconfiguration

Forum for Cork and Kerry, 2009; Deparment of Health and Children, 2011; and The National Emergency Medicine Programme, 2012). However, this study demonstrates that while increased education may be linked with increased competence in terms of clinical skills (McCarthy, et al., 2013) it is not related to increased clinical autonomy among emergency nurses. Therefore, future health strategies that include the need to increase the skills and knowledge of nurses to respond to challenges in healthcare delivery should be cognisant of the role that the individual organisations play in realising the potential of nurses. Education alone will be fruitless if the organisations in which nurses practice do not authorise, support, facilitate and value nurses in increasing their clinical autonomy.

6.8 Relationship Between Sample Characteristics and Level of Nurse/Physician Collaboration

The relationship between level of Nurse/Physician collaboration and the personal characteristics of the sample were examined in this study.

Studies reviewed earlier indicated a significant gender distribution difference between nurses and physicians with a higher proportion of males working as physicians than as nurses (Tschannen, 2004; Thomson, 2005; Sterchi, 2007; Taylor, 2009; Jones and Fitzpatrick, 2009; Hughes and Fitzpatrick, 2010; and El Sayed and Saleem, 2011). The potential for either males or females to have a stronger collaborative relationship with physicians was investigated in this study. However, there was no difference between the level of Nurse/Physician collaboration between males (M=73.00, SD=13.51) and females (M=72.50, SD=13.40) in this study ($t(98)=0.126$, $p=0.90$).

Papathanassoglou, et al. (2012) found a positive correlation between level Nurse/Physician collaboration and the level of education among European intensive care nurses (r=0.164). The strength of this correlation, however, was small (Cohen, 1988). This study found no relationship between Nurse/Physician collaboration and level of education among emergency nurses in Ireland (undergraduate level M=73.00, SD=14.02, postgraduate level M=71.58, SD=11.85; t(98)=0.492, p=0.62; eta squared= 0.002). While at odds with the findings from Papathanassoglou, et al (2012) it must be noted that the strength of the relationship in their study was small. Indeed, this study also investigated if there was a relationship between specialist emergency nursing education and levels of Nurse/Physician collaboration among participants. Again, this study found that there was no difference between the levels of Nurse/Physician collaboration among nurses who had completed specialist emergency nursing education (M=71.71, SD=13.68) and nurses who had not completed specialist emergency nursing education (M=73.13, SD=13.20) (t=(98)=-.521, p=0.603) (eta squared=0.003). Findings from this study indicate that, among emergency nurses in Ireland at least, level of education has no influence on the strength of the collaborative relationship between the professions. This finding would suggest that the move from an apprenticeship style nurse training to a graduate profession (Department of Health, 2012) in Ireland has had no influence over the level of collaboration between nurses and physicians. Future research on Nurse/Physician collaboration in Ireland should consider investigating this issue further.

This study found no relationship between the personal characteristics of the sample and the level of Nurse/Physician collaboration among participants. These findings suggest that the nature of the Nurse/Physician collaborative relationship is not

based on personal characteristics such as gender, education or experience. As Nurse/Physician collaboration has been linked with quality in healthcare (Baggs, et al., 2004; Lindeke and Sieckert, 2005; and Vaziriani, et al., 2005) it is an important issue and warrants further investigation in terms of how it is influenced and how it can be enhanced. The need to provide and develop a competent and knowledgeable nursing profession will continue to exist in a dynamic healthcare system that aims to continuously improve. Educational provision and strategies to recruit and retain experienced and well educated nurses will continue to have a large part to play in meeting the demands on nursing as a profession in meeting this agenda. However, this study demonstrates that in terms of improving collaboration between nurses and physicians as part of overall service quality improvement these strategies alone have no influence. There is a need to focus on the Nurse/Physician collaborative relationship in tandem with education and staffing (retention of experienced nurses) approaches to help meet the healthcare quality agenda.

6.9 Relationship Between Level of Nurse/Physician Collaboration and Organisational Influence on Nursing

This study investigated if the organisation in which emergency nurses worked had any influence over their level of Nurse/Physician collaboration. As discussed previously, the characteristics of the study participants were found to have no influence over their level of Nurse/Physician collaboration. This is similar to the findings related to the relationship between the sample characteristics and their level of clinical autonomy. Among the antecedents to Nurse/Physician collaboration identified in Chapter 3 is *'organisational encouragement and support*

for Nurse/Physician Collaboration' (Hennemann, Lee and Cohen, 1995; and Petri, 2010).

This study found that there was a relationship between Nurse/Physician collaboration and Organisational Influences on Nursing [r=-0.413, n=100, p<0.001] indicating that higher levels of Nurse/Physician collaboration were related to more positive levels of Organisational Influence on Nursing. Again, in relation to influencing levels of Nurse/Physician collaboration, the significance of the role of the organisation is established. Indeed, this is supported by Hennemann, Lee and Cohen (1995) who believe in the necessity for organisational support and championing of collaboration for collaboration between healthcare disciplines to exist.

The data on the influence of the organisation on Nurse/Physician collaboration was further analysed in Chapter 5 to examine the correlation between levels of Organisational Influence on Nursing and the subscales on the NPCS. This study found that the strongest relationship was between scores on the Organisational Influence on Nursing Scale and *'about sharing patient information'* (r=-0.418, p<0.001). The sharing of patient information was identified as one of the key attributes of Nurse/Physician collaboration in Chapter 3 (Hennemann, Lee, Cohen, 1995; Ushiro, 2009; and Petri, 2010). Indeed, sharing of information is based on effective communication between nurses and physicians, an antecedent to Nurse/Physican collaboration (Hennemann, Lee, Cohen, 1995; and Petri, 2010). This study demonstrates that the organisations in which nurses and physicians work have a significant role to play in encouraging the professions to share-information and that it is in this element of the Nurse/Physician collaboration that they can have the strongest influence.

The value of understanding communication between nurses and physicians in terms of providing effective care for patients is highlighted by Malloy, et al. (2009). Indeed, when mistakes resulting in serious consequences for patients occur in healthcare the issue of poor interprofessional communications and relationships are often reported as the core problem (Rafferty, Ball and Aiken, 2001). Based on the findings from this study it is clear that the organisation needs to take an active role in encouraging and supporting Nurse/Physician collaboration. According to Aiken, et al. (2002) the ideal organisational climate for nurses is one where there are better relationships between nurses and physicians. Indeed Gifford (2002) states that the success of magnet hospitals has been linked with, among other issues, Nurse/Physician collaboration. Strategies aiming to improve patient care need to address the role of the organisation in encouraging and supporting Nurse/Physician collaboration.

Summary

Data provided by participants on their individual characteristics, specifically gender, age, registerable qualifications, and experience raised a number of issues for discussion in this chapter.

The majority of participants in this study were female (87%). Of note was that the proportion of males (13%) was almost double the proportion of males registered to practice nationally (7.75%) suggesting emergency nursing attracts greater numbers of males. Participants were also quite young with a mean age of 35.57 years (SD=7.83). However, 75% of respondents were under 40 years of age, again differing significantly from what is reported about the general nursing population

(NMC, 2008; and Turner, et al., 2009). This finding raises questions about the retention of older nurses in EDs and warrants further investigation.

While all participants in this study were registered to practice on the general division of the nurses register in Ireland only 14% of participants held registrations on another division of the register. This raises issues about care of patients with specific needs such as children and patients with mental health emergencies. All participant EDs were mixed meaning that they cared for adults and children yet only 4% of participants were children's nurses. This raises a concern about care of children in mixed EDs and the ability of nurses to provide adequate care (Grant and Crouch, 2011; and Snow, 2013). Similarly, only 3% of participants were registered as psychiatric nurses despite rising attendances at EDs by patients with mental health emergencies. Indeed, regarding issues such as alcohol and substance misuse, 73% of emergency nurses indicated that they had received not education in this area (Kelleher and Cotter, 2009) which has been attributed to a lack of competence in this area of care (McPeake, O'Neill and Kinsella, 2013). Previous research has also demonstrated that emergency nurses view patients with mental health emergencies as problematic (Sivakumar, et al., 2011). In terms of additional registrations among participants it was also surprising to note that none of the participants were registered to prescribe medicinal products. It can only be assumed that the reason for this is the continuous presence of medical staff in EDs negating the usefulness of the initiative in the ED setting. This is an issue that requires further investigation.

Staff nurses in this study were found to be relatively well educated with 31% of participants possessing postgraduate qualifications. The education profile of participants reflected a younger sample with only 7% of participants educated to

hospital certificate level. This was the educational level for registration as a nurse up to 1996 when the Diploma in Nursing programmes began (University of Southampton, 1998) which lasted until when nursing became a graduate profession with the introduction of the Degree in Nursing in 2002 (Department of Health, 2012). Only 40% of the sample indicated that they had obtained a specific emergency nursing qualification. In terms of dealing with such a diverse patient group (Emergency Medicine Programme, 2012) this findings raises questions about the ability of emergency nurses to provide adequate care. McCarthy, et al. (2013) found that emergency nurses in Ireland reported good levels of competence in a large number of emergency nursing skills. Notwithstanding their findings there may still a question over emergency nurses ability to respond to the needs of such a diverse group of patients.

Reflective of the age profile of participant staff nurses is the length of experience of participants. While participants indicated that they had between 2 months and 38 years nursing experience (in all areas) the median length of experience of participants was 10.17 years (IQR=9.44). Indeed, participants had considerably less emergency nursing experience with a median length of experience of 6.04 years (IQR=6.37; range 1month to 25 years). On the surface this finding raises an issue with retaining emergency nurses in Irish EDs. When the literature is examined it is clear that this is not an Irish phenomenon with Sawatzky and Enns (2012) findings that Canadian ED nurses had a similar length of experience profile with a median of 6.04 years in this study. Indeed it is acknowledged that retention of ED nurses is a worldwide issue (Robinson, Jagim and Ray, 2005; Jackson, 2006; Morphet, Considine and McKenna, 2011; and Sawatzky and Enns, 2012). Of relevance to the discussion surrounding this study is in relation to the key predictors for ED nurses

to leave their posts including involvement in decision-making, encouragement of collaboration with physicians and autonomy in practice (Hayhurst, et al., 2005; Robinson, Jagim and Ray, 2005; Jackson, 2006; and Mosely and Peterson, 2008).

Clinical autonomy was measured using the DPBS (Dempster, 1990) which demonstrated good reliability in this study (Cronbach's alpha= 0.86). The mean DPBS score for participants in this study was 104.52 (SD=12.53) from a possible range from 30-150. While there is no available guidance on whether this result indicates weak, moderate or strong level of clinical autonomy the result can be compared with other studies using this instrument. This instrument has been used primarily in studies examining autonomy among advanced practice nurses (Ulrich, Soeken and Millar, 2003; Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; and Maylone et al., 2010) who indicated mean scores ranging from 117.37 to 127.19 in studies. Researchers in these studies on advanced practice nurses indicated that these results represented high levels of autonomy in these nurses practice and based on this it can be assumed that participants in this study had moderate levels of clinical autonomy. While previous research on emergency nurses in Ireland indicated that they had high levels of competence in a wide range of skills, many considered at an advanced level (McCarthy, 2013), this study demonstrates that they do not have the same level of clinical autonomy possessed by advanced practice nurses who have the authority to use the skills. This study demonstrates that the issue of clinical autonomy differs from practice level to practice level of nurses and highlights that skills competence in isolation is not sufficient to enable nurses to use those skills.

Nurse/Physician collaboration was measured using the NPCS (Ushiro, 2009) and demonstrated good reliability for the scale overall (Cronbach's alpha=0.918) as

well as the subscales (*about sharing patient information* Cronbach's alpha=0.82; *about the decision-making process on the cure/care* Cronbach's alpha=0.90; *about the relationship between nurse and physician* Cronbach's alpha=0.83) confirming the scale's utility in an Irish setting. Mean NPCS score for participants was 72.56 (SD=13.34). No information on the interpretation of results was available for the instrument and there was a dearth of comparative data from other published studies. A study by Nair, et al. (2012) using the NPCS did not comment on the interpretation of the mean scores reported. The strongest scores for participants in Nair, et al.'s (2012) study was for sharing information while in this study participants scored higher for the relationship between nurse and physician. Participants in Nair, et al.'s (2012) study were from an acute care hospital while in this study participants were from the ED. Practice setting may have a part to play in terms of levels of the individual subscales reported by respondents. Physicians working in EDs are present on a constant basis and therefore rely less on clinical information about patients from nurses than physicians who work in areas that do not require them to be present on a constant basis. It is logical to expect that the Nurse/Physician Collaborative relationship will be built more on the relationship between nurse and physician who are working together throughout a shift. Information sharing may be more relevant in areas of practice where physicians are not always present and not in the presence of their patients on a constant basis. The presence and access of physicians in the clinical area and its influence on nurse physician collaboration is worthy of future research.

The issue of the influence of the organisation on the practice of nurses was raised in the literature reviewed earlier in this thesis (Kramer and Schmalenberg, 2003; Stewart, Stansfield and Tapp, 2004; Mrayyan, 2004; Attree, 2005; Norris and

Melby, 2006; Kramer, et al., 2007; Plager and Conger, 2007; Cajulis and Fitzpatrick, 2007; and Gagnon, et al., 2010). A new scale to measure this influence the Organisational Influence on Nursing Scale was developed as part of this study. While the development of the instrument was described earlier it demonstrated good reliability in this study (Cronbach's alpha=0.797). Following this study further development of this instrument needs to take place. One of the items (item 7 *'....has too many policies, procedures and routines'*) had received an I-CVI of 1.00 from the expert panel but demonstrated some weakness in terms of reliability in this study. Further testing including test-retest reliability of the instrument as well as using the instrument with nurses from different settings needs to take place following this study. Consideration needs to the inclusion or refinement of item 7 on the scale in future studies. Participants' mean score on the instrument was 27.95 (SD=4.48; possible range 8-40) which is difficult to interpret in terms of the magnitude of how positive participants believed the organisation in which they worked influenced their practice. Further research using the instrument will give an indication of differences between organisations and practice areas. The purpose of developing and using the instrument in this study was to identify if there was a relationship between Organisational Influence on Nursing and levels of clinical autonomy and Nurse/Physician collaboration among those nurses.

This study sought to investigate if there was a relationship between the personal characteristics of participants in terms of gender, age, qualifications, education and experience among participants and their level of clinical autonomy. None of these characteristics were found to have a relationship with clinical autonomy among emergency nurses. This finding highlights that any strategy that proposes an increase in skills and knowledge among emergency staff nurses (Reconfiguration

Forum for Cork and Kerry, 2009; and The Emergency Medicine Programme, 2012) in response to evolving healthcare needs need to be aware that these approaches in isolation may not increase nurses' involvement in patient care in terms of clinical autonomy. Indeed, it has been demonstrated, in Ireland at least, that emergency nurses perceive that they are competent in a wide range of emergency nursing skills, some considered at an advanced level (McCarthy, et al., 2013). However, this study demonstrates that while education, experience and qualifications may provide emergency nurses with the knowledge and skills to practice at an advanced level they do not convey the clinical autonomy on emergency nurses to practice at this level.

This study found that there was a relationship between clinical autonomy and Nurse/Physician collaboration among emergency nurses [$r=-0.395$, $n=100$, $p<0.001$]. This finding supports the idea that autonomy is context based and is cogniscent of an interaction with a wider society (MacDonald, 2002; Weston, 2009; and Iliopoulou and While, 2010). Any strategy seeking to increase the clinical autonomy of emergency nurses needs to focus on building the Nurse/Physician Collaborative relationship. The strongest correlation with clinical autonomy was with the subscale 'about the decision-making process on cure/care' ($r=0.331$, $n=100$, $p<0.001$) reflecting that nurses clinical autonomy was very much associated with their involvement in patient care decision-making. This finding also supports the notion that clinical autonomy is not about independence but interdependence with other members of the healthcare team, in this case physicians (Weston, 2006).

This study found that there was a relationship between the level of clinical autonomy among emergency nurses and the level of Organisational Influence on

Nursing practice i.e. the more positive the Organisational Influence the higher the level of clinical autonomy ($r=0.455$, $n=100$, $p<0.001$). These findings highlight the importance of the role of the organisation in positively influencing the level of clinical autonomy among emergency nurses and thus increasing their involvement and responsibility in providing patient care and are supported in the literature (Hinno, et al. 2009). Again this finding highlights the need for any strategy to increase emergency nurses' involvement in care to be aware of the important role that the organisation plays in increasing the clinical autonomy of emergency nurses.

This study sought to see if there was any relationship between the characteristics of the sample such as gender, age, qualifications, education and experience and the level of Nurse/Physician collaboration among emergency nurses. No relationship was found. In terms of increasing Nurse/Physician collaboration as part of the wider healthcare quality agenda (Baggs, et al., 2004; Lindeke and Siekert, 2005; and Vaziriani, et al., 2005) it is clear that the personal characteristics of emergency nurses have no part to play. The nature of this relationship and the specific influences on Nurse/Physician collaboration are worthy of future investigation.

The literature reviewed in relation to Nurse/Physician collaboration suggests that the organisation had a role to play in influencing the levels of Nurse/Physician collaboration (Hennemann, Lee and Cohen, 1995; and Petri, 2010). This study found that there was a relationship between Nurse/Physician collaboration and Organisational Influence on Nursing ($r=-0.413$, $n=100$, $p<0.001$). Again, this study highlights the importance of positive influence from the organisation in which nurses work on the level of collaboration between nurses and physicians. Indeed, the strongest correlation was between Organisational Influence on Nursing and the

subscale *'about sharing patient information'* (r=-0.418, n=100, p<0.001). In terms of patient safety this study demonstrates that the organisations in which nurses work have a vital role in encouraging effective communication between nurses and physicians, an important factor in preventing healthcare mistakes (Rafferty, Ball and Aiken, 2001; Gifford, 2002; and Malloy, et al., 2009).

Conclusion to Thesis

There is an acknowledgement in the literature that autonomy and collaboration between nurses and physicians have a positive influence on healthcare and health outcomes for patients (McCarthy, et al., 2003; Baggs, et al., 2004; Institute of Medicine, 2004; Lindeke and Siekert, 2005; Vaziriani, et al, 2005; Zurmehly, 2008; Mosely and Paterson, 2008; and Shang, et al., 2012). This study arose from an identified need for nursing as a profession to respond to emerging healthcare needs in Ireland (Department of Health and Children, 2003; Reconfiguration Forum for Cork and Kerry, 2009; and Department of Health and Children, 2001). Skills education appears to be one proposal in increasing the involvement of nurses in care delivery. However, a study by McCarthy, et al. (2013) found that emergency nurses in Ireland reported high levels of competence in a number of advanced emergency nursing skills. The study did not investigate if emergency nurses had the autonomy to use those skills and what influenced their autonomy in practice. Indeed, emergency staff nurses were found to have lower levels of autonomy in practice than nurses from other practice areas of different practice levels within the ED (Browning, et al., 2007; and Adrienssens, et al., 2011).

The aim of this study was to investigate the levels of clinical autonomy and Nurse/Physician collaboration among emergency nurses in Ireland. A secondary aim was to examine if personal factors such as the gender, age, qualifications and experience of emergency nurses, and the level of influence from the organisation in which they worked had any influence over their level of clinical autonomy or Nurse/Physician collaboration.

Chapter one of this thesis presents an examination of the theoretical literature relating to autonomy. It is clear from the literature presented in this chapter that there are divergent views on defining autonomy. At a basic level autonomy is viewed as self-determination over decision-making (Maas, et al., 1975; Wade, 1999; Lawerence, 2007; and Neuhouser, 2011). However, further examination of the theoretical literature in this chapter reveals a much more complex concept. There is an acknowledgement in the theoretical literature that autonomy is based on one's ability, capacity and authority for self-determination as a participating member of a wider society (MacDonald, 2002; Nickel, 2007; and Blöser, et al., 2009). The understanding of autonomy in the healthcare literature reflects that from society in general believing autonomy to be exercised by competent persons equipped with sufficient knowledge to make decisions and based on respect for the person (Beauchamp and Childress, 2001; Cuypers, 2004; and Barilan, 2011). The nursing literature contains a number of divergent views on autonomy in the profession and the levels of independence involved in what can be viewed as autonomous nursing practice (An Bord Altranais, 1999; Keenan, 1999; McParland, et al., 2000; Kramer, Schmalenberg and Maguire, 2006; Seago, 2006; Weston, 2006; and Lewis, 2006). What emerges is an understanding that acknowledges the boundaries within which nurses practice and the level of freedom with which

nurses practice (Weston, 2008). The theoretical literature also demonstrates the confusion over what defines autonomy in nursing with an emergent belief that autonomy in clinical practice (clinical autonomy) being of most relevance for practicing clinical nurses (Cash, 2001; Kramer, et al., 2006; and Weston, 2008). A concept analysis of clinical autonomy is presented in Chapter 1 to create clarity around the concept for this study.

The empirical literature on autonomy in nursing examined in Chapter 2 revealed that autonomy in providing nursing care (clinical autonomy) is most relevant to nurses (Mrayyan, 2004; Stewart, Stansfield and Tapp, 2004; and Skår, 2009). The studies reviewed in this chapter also found that professional interdependence was not incongruent with an understanding of autonomy in nursing (Stewart, Stansfield and Tapp, 2004). Differences in levels of autonomy among nurses from differing practice settings and at different practice levels are also apparent in the literature indicating that Emergency Department staff nurses may have lower levels of autonomy in their practice than nurses from other settings (Adrienssens, et al., 2010) or at different levels (Browning, et al., 2007). A number of influences on the autonomy of nurses in clinical practice were found in the empirical literature including many based around the organisation in which they worked in terms of policies procedures, sanction/ authority to practice and the practice setting itself. Based on the empirical literature reviewed the role of the organisation in determining the level of clinical autonomy among emergency nurses required investigation in this study.

The role of the nurse/physician relationship also emerged from review of both the theoretical and empirical literature and was examined in detail in Chapter 3. The theoretical literature on Nurse/Physician collaboration describe a concept that is

less complex than autonomy in nursing but related to autonomy nonetheless. A concept analysis of Nurse/Physician collaboration was conducted to create an understanding of the concept for this study. An analysis of the concept also identifies that the organisation in which nurses work have a role to play in supporting Nurse/Physician collaboration (Hennemann, et al., 1995; Ushiro, 2009; and Petri, 2010). Consequences from Nurse/Physician collaboration in terms of benefits to both patients and nurses with improved morale, nurse satisfaction, improved patient care and outcomes, improved productivity and reduced costs and fragmentation of care (Hennemann, Lee and Cohen, 1995; Deschario-Marino, et al, 2001; Baggs, et al., 2004; Vaziriani, et al., 2005; and Petri, 2010) support the investigation of this concept among emergency nurses in a challenged healthcare environment. The empirical literature reviewed on Nurse/Physician collaboration highlights the importance of this relationship to the clinical autonomy of nurses. There are differing findings on whether Nurse/Physician collaboration has a positive, negative or indeed no influence on the clinical autonomy of nurses (Stewart, Stansfield and Tapp, 2004; Hinno, et al., 2006; and Gagnon, et al., 2010). However a number of studies reviewed found that relationships between nurses and physicians based on poor communication and conflict have a negative influence on the level of clinical autonomy among nurses (Mrayyan, 2004; Norris and Melby, 2006; and Plager and Conger, 2007). On balance, the empirical literature indicates that good Nurse/Physician collaboration positively impacts on the clinical autonomy of nurses (Deschaio-Marino, et al., 2001; Hinno, et al., 2009; Gagnon, et al., 2010; Maylone, et al., 2010; Papathanassoglou, et al., 2012).

This was a descriptive correlational study to investigate clinical autonomy and Nurse/Physician collaboration among emergency nurses. Based on the aims and

specific objectives a number of hypotheses are proposed in chapter 4. The methods used in conducting this study are described in detail. A new instrument was developed for this study (Organisational Influences on Nursing Scale) and the development and testing of this instrument are also described in detail in this Chapter.

Chapter 5 of the thesis details the findings from the study. There was a 70.9% (n=100) response from staff nurses working in participant Emergency Departments (ED) to this study. Analysis of the sample characteristics reveal that the majority of participants were female (87%) and relatively young with a mean age of 35.57 years (SD=7.83, range 23 to 59 years). All participants held registration on the general nurses' register held by An Bord Altranais agus Cnaimhseachais with only 14% being registered on an additional register such, children's nurses (4%), midwives (7%) and psychiatric nurses (3%). None of the participants were registered to prescribe medicinal products. While the majotity of participants were educated at undergraduate level (69%), 31% held postgraduate level qualifications at Postgraduate Diploma (26%) or Masters Degree (5%) level. Emergency nursing qualifications were held by 40% of participant staff nurses. Median length of nursing experience among participants was 10.17 years (IQR=9.44) with paticipants indicating a median length of emergency nursing experience of 6.04 years (IQR=6.37) indicating low levels of experience among emergency department staff nurses.

Clinical autonomy was measured using the Dempster Practice Behaviours Scale (DPBS) (Dempster, 1990) and was found to have good reliability in this study (Cronbach's alpha=0.86). Overall mean DPBS score for participants was 104.54

(SD=12.53) (possible range 30 to 150) which appears to be a moderate level of clinical autonomy when compared to findings from other studies.

Nurse/Physician collaboration was measured using the Nurse/Physician Collaboration Scale (NPCS) (Ushiro, 2009) and both this scale (Cronbach's alpha=0.918) and its subscales (Cronbach's alpha ranging 0.816 to 0.895) were found to have good reliability in this study. Overall mean NPCS score for participants was 72.56 (SD=13.34) (possible range 27 to 135). How this finding relates to level of Nurse/Physician collaboration is difficult to interpret in the absence of guidance or widespread use of this instrument in published studies. The strongest response among participants was for the subscale regarding the *relationship between nurse and physician* while the weakest response was for the subscale regarding the *decision-making process about cure/care.*

Organisational Influences on Nursing was measured by a newly developed instrument for this study: the Organisational Influence on Nursing Scale. The Organisational Influence on Nursing Scale was found to have good reliability (Cronbach's alpha=0.797) in this study. Item 7 on the scale *'has too many policies procedures and routines involved in patient care'* had a low corrected item-total correlation (0.150) and the reliability of the instrument would have improved slightly (Cronbach's alpha increase from 0.797 to 0.840) if this item were removed. Possible scores on this scale range from 8 to 40 with an overall mean score for participants of 27.95 (SD=4.48). The most frequently occuring influence from the organisation on nursing practice was found to be *'encorages me to communicate with all members of the healthcare team'* (M=4.08; SD=0.88) with *'has too many policies, procedures and routines'* (M=2.62; SD=0.84) being the least frequently occuring influence among participants.

A number of hypotheses were tested regarding the relationship between the characteristics of the sample and their level of clinical autonomy. There were no relationships found between emergency nurses' level of clinical autonomy and their gender (males M=109.46, SD=12.01; females M=103.81, SD=12.50; t(98)=1.53, p=0.13), age [r=0.116, n=100, p=0.251], or level of education (undergraduate M=104.70, SD=11.59; postgraduate M=104.19, SD=14.60; t(98)=0.185, p=0.85). There was no relationship found between participants who had achieved a specific emergency nursing qualification (M=105.74, SD=13.27) and those who had not (M=103.74, SD=12.05; t(98)=0.783, p=0.606). Length of nursing experience [r=0.168, n=100, p=0.95] and specifically emergency nursing experience [r=0.072, n=100, p=0.479] were also found not to have any influence on the level of clinical autonomy of participant emergency nurses. A relationship was found to exist between levels of clinical autonomy among emergency nurses and the level of Organisational Influence on Nursing [r=0.455, n=100, p<0.001] which reached statistical significance in this study.

A number of hypotheses were tested regarding the relationship between. Nurse/Physician collaboration and the characteristics of the sample. No relationship was found between gender (male M=73.00, SD=13.51; female M=72.50, SD=13.40; t(98)=0.126, p=0.90), age (r=0.116, n=100, p=0.251), level of education (undergraduate M==104.70, SD=11.59; post graduate M=104.19, SD=14.60; t(98)=0.185, p=0.85) or whether participants had achieved a specific emergency nursing qualification (M=105.74, SD=13.27) or not (M=103.74, SD=12.05; t(98)=0.783, p=606) and the level of Nurse/Physician collaboration among participants. There was also no relationship found between levels of nursing experience (r=-0.056, n=100, p=0.577) or emergency nursing experience (r=-0.140,

n=100, p=0.166) and the level of Nurse/Physician collaboration among participant emergency staff nurses. There was a relationship found between the level of Nurse/Physician collaboration and Organisational Influence on Nursing (r=-0.413, n=100, p<0.001).

Finally the relationship between levels of clinical autonomy and Nurse/Physician collaboration was examined. This study found a relationship between levels of clinical autonomy and Nurse/Physician collaboration among participants in this study [r=-0.395, n=100, p<0.001].

Chapter 6 of this thesis discusses the findings from this study in terms of the literature reviewed earlier in the dissertation. Issues relating to nursing practice that emerge from the findings are also discussed in this chapter.

In relation to the conceptual framework proposed for this study (Appendix II), this study has found that none of the personal factors such as gender, age, qualifications and experience had any influence on the level of clinical autonomy of Emergency Nurses or their level of Nurse/Physician collaboration. The part of the framework addressing the relationship between clinical autonomy and Nurse/Physician collaboration was supported by the findings from this study. The study findings also support the existence of a relationship between Organisational Influence on Nursing and clinical autonomy and Nurse/Physician collaboration among emergency nurses.

Strengths and Limitations of Study

All effort was taken throughout this study to ensure that the study was conducted in an appropriate fashion utilising the best research principles throughout the process. This has meant that the study has strengths in a number of areas. However, little research is without its limitations and these too are identifiable throughout this study.

Study Strengths

The main strengths in this study lie with the sample and the instruments used to collect data.

- A sample of 100 emergency department staff nurses were sucessfully recruited for this study representing a response rate of 70.9%. This is a good response rate for this type of study. This was a study investigating clinical autonomy and Nurse/Physician collaboration among emergency department staff nurses. The total number who participated in the study represented almost 1 in 8 of all staff nurses who are employed in EDs in the Republic of Ireland. This representation supports the generalisability of the findings to ED staff nurses in Ireland.

- The two main instruments used in the study, the Dempster Practice Behaiours Scale (DPBS) (Dempster, 1990) and the Nurse/Physician Collaboration Scale (NPCS) (Ushiro, 2009), do not appear to have been used among emergency nurses. Both of these instruments demonstrated good reliability among emergency staff nurses.

- A new instrument was developed for this study. The Organisational Influence on Nursing Scale was developed from the literature reviewed as part of this study. The instrument has good content validity with a strong Content Validity Index score for the scale. It also has demonstrated good reliability in this study.

Limitations

There are a number of limitations with this study relating to the instruments used, and the conclusions that can be drawn from the findings.

- The Organisational Influence on Nursing Scale is a new instrument developed for this study. While the instrument demonstrated good content validity and good reliability in this study it does require further development and testing. Specifically, one of the items, while achieving an item Content Validity Index score of 1.00 from the review panel demonstrated poor inter-item reliability. The reliability of the instrument would also slightly improve if the item were removed. This item may need to be removed from the instrument in any future studies. The validity of the scale needs to be established in future studies. There was no opportunity to assess the stability of the instrument over time. Future research using this instrument should consider assessing test-retest reliability of the instrument.

- While a relationship between clinical autonomy, Nurse/Physician collaboration and Organisational Influence on Nursing have been found in this study it cannot be assumed that one causes the other i.e. good Nurse/Physician collaboration causes high levels of clinical autonomy, demonstrable correlations do not mean causality. This study does provide

evidence for some of the influences of clinical autonomy and Nurse/Physician collaboration among emergency staff nurses but does not explain entirely how they are influenced. Further research should focus on areas other than the areas investigated in this study to improve the understanding around these issues in practice.

- A number of sample characteristics were measured in this study. While issues such as gender, age, qualifications, education and experience are important personal factors there are others that have not been investigated as part of this study. Data on personal characteristics such as ethnicity and personality traits were not gathered as part of this study. These issues were not raised in the literature reviewed as influences on either clinical autonomy or Nurse/Physician collaboration among nurses. However, the failure to establish a relationship between the sample characteristics investigated in this study and levels of clinical autonomy and Nurse/Physician collaboration should not be generalised to all other personal characteristics among emergency nurses.

- The sample used in this study were staff nurses working in EDs in Ireland. This population were targeted because they constitute the largest single cohort of nurses working in EDs in Ireland. However, other grades of nurse were not included in the study. While there is justification for only investigating the largest cohort of nurses working in Irish EDs the findings cannot be generalised to Clinical Nurse Managers, Advanced Nurse Practitioners or Clinical Facilitators.

Recommendations

Based on the literature reviewed, the findings from this study and the discussion based on those findings there emerge a number of recommendations for practice, education and future research.

Practice

- A number of issues are evident from the demographic data gathered as part of this study. Of concern is the age profile and length of experience of participant staff nurses. The data from this study suggests that there is an issue with retaining staff nurses working in EDs. While this appears to be an international issue organisations need to seek ways to encourage staff nurses to stay in this challenging practice area. There also appears to be few nurses with additional specialist qualifications, particularly in the areas of children's nursing and psychiatric nursing. EDs should seek to recruit staff with specialist qualifications to support the care of particular cohorts of patients requiring specialist care.

- While McCarthy, et al. (2013) found that emergency nurses in Ireland indicated good levels of competence in clinical emergency nursing skills and tasks, some viewed at an advanced level, this study found that the level of clinical autonomy of ED staff nurses is lower than that of advanced practice nurses. Future strategies to increase the skill set and expand the sphere of practice for ED staff nurses need to consider the clinical autonomy of ED nurses as part of these strategies. The development and delivery of education to respond to evolving healthcare needs will not necessarily result in an improved delivery of care and contribution to

service delivery. This study has found no relationship between education and clinical autonomy. While education increases knowledge and skill it does little to ensure that these skills are applied in practice. This needs to be acknowledged and accounted for in any strategy seeking to involve nurses in expanding practice to meet healthcare needs.

- This study has found that Nurse/Physician collaboration positively influences the clinical autonomy of ED staff nurses. This relationship needs to be encouraged and supported as part of any strategy that targets the nursing profession as part of a solution to challenges in delivering modern healthcare. This relationship, apart from positively influencing clinical autonomy among ED staff nurses, has been found to lead to improved quality in healthcare delivery and a reduction in adverse events for patients. Management in EDs need to support Nurse/Physician collaboration and encourage professional and clinical relationships between nurses and physicians to reap the benefits of increased clinical autonomy among nurses and improvements in patient care.

- The role of the organisation in which nurses work in influencing the clinical autonomy of nurses and levels of Nurse/Physician collaboration is evident in this study. The organisations in which nurses work need to realise the role that they themselves have to play in involving nurses more in care delivery in terms of clinical autonomy. Future proposals to increase the involvement in care beyond current interdisciplinary boundaries in response to the challenge for healthcare delivery need to involve a targeted organisational strategy to support these proposals.

Education

- It is evident from the literature reviewed that autonomy in nursing is a complex, often misunderstood, concept. Nurses should be given the opportunity to explore and understand this concept from both a professional and clinical practice perspective. Nurse education should address autonomy in nursing from both the profession and practice perspectives.

- Any education aimed at providing nurses with the knowledge and skills for an enhanced role in healthcare should support the exploration of the application of this knowledge and those skills in practice. This will enable nurses understand the challenges that they might face in applying the knowledge and skills gained through education while equiping them with strategies to overcome these challenges.

Research

- Issues raised in terms of age and length of experience of ED staff nurses warrant further investigation. While there is an acknowledged issue regarding retention of ED staff nurses in the literature there is little understanding as to why this is an issue in EDs particularly. Some of the literature reviewed indicates that level of clinical autonomy may influence retention of nurses. This requires investigation in relation to ED staff nurses.

- Levels of clinical autonomy among nurses from other practice settings in Ireland need to be assessed. While this study has found that levels of clinical autonomy among ED staff nurses are lower than advanced practice

nurses there is no comparative data on staff nurses from other practice settings in Ireland. The literature reviewed suggests that there is a difference in levels of clinical autonomy among ED staff nurses and nurses from other settings.

- The effect of clinical autonomy and Nurse/Physician collaboration among emergency nurses on patient care and service quality needs to be investigated. The potential for improvements in care for patients through increased clinical autonomy and Nurse/Physician collaboration are discussed in the literature. Future research should investigate if these benefits for patients are realised in the ED care setting.

- The Organisational Influences on Nursing Scale was developed for use in this study. This instrument requires use in further studies to assess its psychometric properties. Item 7 on the scale demonstrated poor inter-item reliability with other items on the scale. The suggestion by 2 experts that the rewording of the item to remove the word 'routines' may improve the inter-item reliability of this item needs to be considered prior to any decision to remove this item from the scale in future research. If this item is altered another expert panel will be required to re-validate the scale. In addition to calculating the Content Validity Index (CVI) of the scale the calculation of a kappa coefficient (as a measure of agreement beyond chance) will improve confidence in the validity of the scale (Wynd, et al., 2003). Future research needs to assess the reliability of the instrument in other practice settings while also assessing the test-retest reliability of the instrument.

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Appendix I

Definitions of Autonomy in Nursing

Appendix I

Definitions of Autonomy in Nursing

- "Autonomy is the right or authority to determine and regulate one's own acts without outside interference" (Maas, Specht & Jacox, 1975; pg. 2201).
- "...autonomy is the amount of job related independence, initiative, and freedom either permitted or required in daily work activities" (Stamps & Piedmonte, 1986; pg. 60).
- "...autonomy... the practice of one's occupation in accordance with one's education, with members of that occupation governing, defining and controlling their own activities in the absence of external controls" (Schutzenhofer, 1987; pg. 278).
- "Autonomy is a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviours and sentiments related to readiness, empowerment, actualization and valuation for autonomous practice" (Dempster, 1994; pg. 227).
- "...an individual's ability to carry out the responsibilities of the position without close supervision" (Blanchfield and Biordi, 1996; pg. 43).
- "Professional nurse autonomy is defined as belief in the centrality of the client when making responsible discretionary decisions, both independently and interdependently that reflect advocacy for the client" (Wade, 1999; pg. 310).
- " Autonomy is authority and accountability for one's decisions and activities. The subconcept of professional autonomy is the authority and accountability for practicing one's profession. The subconcept of work autonomy is the authority and accountability for one's work" (Huber, et al., 2000; pg. 252).
- "Professional autonomy implies the right to exercise professional judgement – in adherence to professional standards – in the face of countervailing pressures from institutional authorities, disagreement with members of other professions, or inappropriate demands on the part of patients or clients or the general public" (MacDonald, 2002; pg. 196).
- "Autonomy in nursing is defined as the determine what needs to be done in providing patient care, to act on one's own assessments, and to accept

accountability for those decisions" (Ulrich, Soeken & Miller, 2003; pg. 319).

- "...autonomous practice is influenced by role expectations and institutional culture and is based on expert knowledge accompanied by authority to make decisions and accountability for action" (Stewart, Stansfield & Tapp, 2004; pg. 443).

- "In nursing, work autonomy consists of making unconstrained decisions and being able to act on those decisions" (Mrayyan, 2005; pg. 963).

- "Autonomy is the freedom to make discretionary and binding decisions that are consistent within one's scope of practice and the freedom to act on those decisions" (Lewis, 2006; pg. 1).

- "Autonomy can simply defined as independence or freedom"...where..."decisions are made independently and are based on education and experience of the individual worker. The decisions are generally considered immune from the arbitary exercise of authority" (Seago, 2006; pg. 93).

- "Autonomy is the freedom to act on what you know in the best interests of the patient... to make independent clinical decisions in the nursing sphere of practice and interdependent decisions in those spheres where nursing overlapps with other disciplines... Autonomy is facilitated through evidence based practice, being held accountable in a positive, constructive manner, nurse manager support and it often exceeds standard practice" (Kramer, Maguire & Schmalenberg, 2006; pg. 480).

- "An individual's ability to develop and implement professional practice role of nursing and to carry out responsibilities of the position without close supervision" (Kramer, Maguire & Schmalenberg, 2006; pg. 483).

- "The freedom to use judgement and decision making skills to make clinical decisions regarding patient needs, delegation of patient care activities, and nursing care outcomes" (Kramer, Maguire & Schmalenberg, 2006; pg. 483).

- "Autonomy to practice one's skills is the exercise of considered independent judgement and the freedom to make considered independent judgement and the freedom to make discretionary decisions, actions, and plans according to one's scope of practice, which requires that practitioners be self-directed, intellectually flexible, responsible, and accountable for their actions" (Cajulis & Fitzpatrick, 2007; pg. 501).

- "...organizational autonomy, describes decision making that guides the work of the unit, department or organization" (Weston, 2008; pg. 405).

- “Clinical Autonomy describes decisions made by nurses about individual patient care and consequently involves decisions made within the existing professional, regulatory, organizational, and departmental rules” (Weston, 2008; pg. 406).

- “Clinical Autonomy is the endorsed expectation to apply nursing knowledge and skills to patient care in the context of an interdependent practice, even if the action required is beyond the usual standard of nursing practice” (Weston, 2009; pg. 88).

- “...work autonomy .....the freedom and discretion in work scheduling including (a) the ability to influence work time, break time, and pacing of tasks; (b) work methods including influence over proceedures and processes; and (c) work criteria including the ability to participate in setting goals and means for evaluating the achievement of goals” (Weston, 2009; pg. 88).

- “Autonomy is recognized as the basis for decision making and such an attribute makes it possible for nurses (based on evaluation and analysis of person/family subjective human components such as values and beliefs) to provide and take on care and responsibilities...” (Paganini, 2010; pg. 286).

- “Autonomy is a multidimensional phenomenon .... implying the right to exercise discretional decisions in the context of an interdependent healthcare team in accordance with socially and legally granted freedom from the nursing profession” (Iliopoulou & While, 2010; pg. 2520).

Appendix II

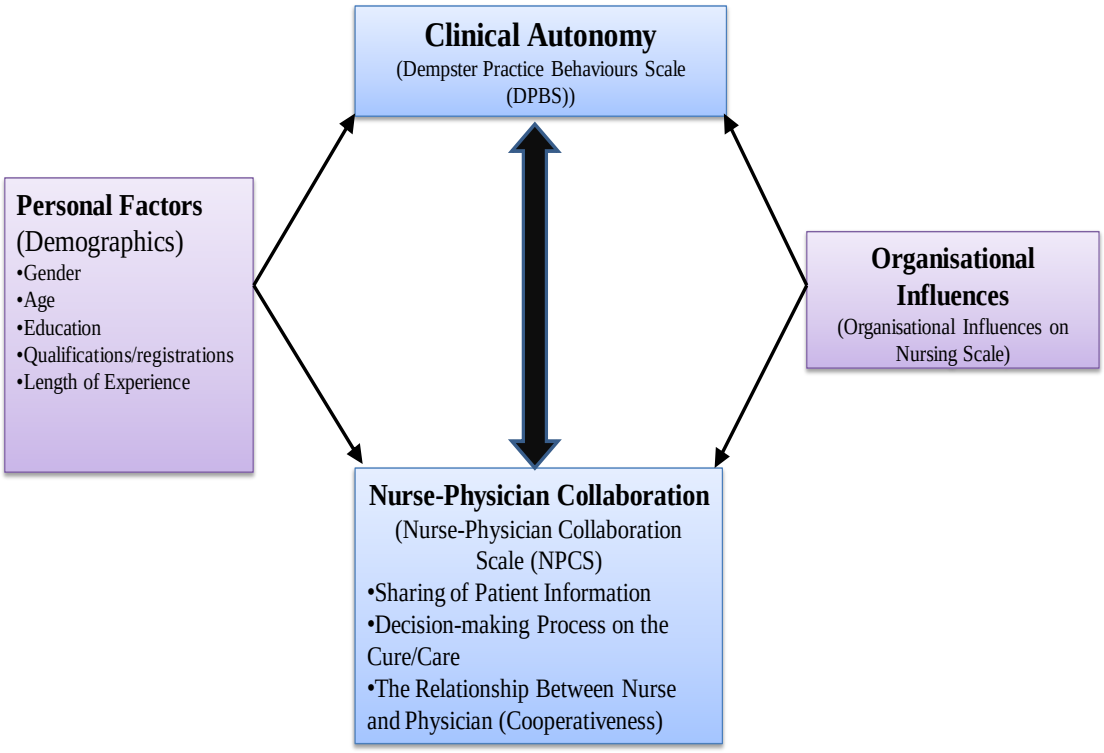
Conceptual Framework

Conceptual Framework

Clinical Autonomy and Nurse/Physician Collaboration:

Applied to Staff Nurses Working in Emergency Departments

(Measures)



Appendix III

Questionnaire

Background Information

In this section I would like you to answer some questions about yourself and your nursing qualifications and experience.

Instructions:

Please place a tick in the box next to the response that best describes your current situation or write your response where approriate.

1. ***Gender***

Male [ ] Female [ ]

2. ***What is your age?***

_____ years

3. ***Registrations***

Please indicate *all* current registrations that you hold.

General Nursing (RGN) [ ] Intellectual Disability Nursing (RNID) [ ]

Midwifery (RM) [ ] Nurse Prescriber (RNP) [ ]

Psychiatric Nursing (RPN) [ ] Children's Nursing (RCN) [ ]

4. ***Education***

Please indicate the qualifications that you have obtained

Certificate [ ] Diploma in Nursing [ ]

Bachelors Degree [ ] Post Graduate/ Higher Diploma [ ]

Masters Degree [ ] PhD/Doctoral Degree [ ]

5. **Have you achieved a Specific Emergency Nursing Qualification?**

Yes [ ] No [ ]

6. **Length of Nursing Experience**

Please indicate how long you have been qualified as a nurse

_____ years _____ months

7. **Length of Emergency Nursing Experience**

Please indicate how long you have been working as a nurse in the Emergency Department

_____ years _____ month

DPBS

Please CAREFULLY read and think about EACH statement below.

For each statement, mark the response that BEST indicates how TRUE that statement is for you.

IN MY PRACTICE I . . .	NOT AT ALL TRUE	SLIGHTLY TRUE	MODERATELY TRUE	VERY TRUE	EXTREMELY TRUE
	1	2	3	4	5
1 . . . take responsibility and am accountable for my actions.					
2 . . . have developed the image of myself as an independent professional.					
3 . . . base my actions on the full scope of my knowledge and ability.					
4 . . . self-determine my role and activities.					
5 . . . derive satisfaction from what I do.					
6 . . . take control over my environment and situations I confront.					
7 . . . am valued for my independent actions.					
8 . . . am constrained by bureaucratic limitations.					
9 . . . provide quality services through my actions.					
10 . . . am confident in my abilities to perform my role independently.					
11 . . . have been professionally socialized to take independent action.					
12 . . . function with the authority to do what I know should be done.					
13 . . . have too many routine tasks to exercise independent action.					
14 . . . have a sense of professionalism.					
15 . . . have the rights and privileges I deserve.					
16 . . . have the professional experience needed for independent action.					
17 . . . am restrained in what I can do because I am powerless.					
18 . . . collaborate with others outside my field when I feel there is a need.					
19 . . . derive feelings of self-respect and esteem from what I do.					
20 . . . make my own decisions related to what I do.					
21 . . . possess ownership of my practice; that is, my role belongs to me.					
22 . . . have the power to influence decisions and actions of others.					
23 . . . have a sense of self-achievement.					
24 . . . am provided with a legal basis for independent functioning.					
25 . . . demonstrate mastery of skills essential for freedom of action.					
26 . . . have my activities and actions programmed by others.					
27 . . . have the respect of those in other disciplines.					
28 . . . cannot optimally function because I do not have legal status.					
29 . . . establish the parameters and limits of my practice activities.					
30 . . . accept the consequences for the choices I make.					

Nurse–Physician Collaboration Scale

The purpose of this scale is to determine the extent of collaborative behaviors that generally exists between a single nurse/physician and other physicians/nurses with whom they work in providing patient care. For each statement circle (○) the box that indicates the frequency with which each behavior occurs. Please answer each item as best you can.

About sharing of patient information

	Always	Usually	Sometimes	Rarely	Never
The nurses, the physicians, and the patient have the same understanding of the patient's wish for cure and care.	1	2	3	4	5
The nurses and the physicians identify the key person in a patient's life.	1	2	3	4	5
The nurses and the physicians all know what has been explained to a patient about his/her condition or treatment.	1	2	3	4	5
The nurses and the physicians have the same understanding of the future direction of the patient's care.	1	2	3	4	5
In the event of a change in treatment plan, the nurses and the physicians have a mutual understanding of the reasons for the change.	1	2	3	4	5
The nurses and the physicians share information to verify the effects of treatment.	1	2	3	4	5
The nurses and the physicians check with each other concerning whether a patient has any signs of side effects or complications.	1	2	3	4	5
The nurses and the physicians share information about a patient's reaction to explanations of his/her disease status and treatment methods.	1	2	3	4	5
The nurses and the physicians share information about a patient's level of independence in regard to activities of daily living.	1	2	3	4	5

About decision-making process on the cure/care

	Always	Usually	Sometimes	Rarely	Never
The nurses and the physicians seek agreement on signs that a patient can be discharged.	1	2	3	4	5
The nurses and the physicians discuss the problems a patient has.	1	2	3	4	5
The future direction of a patient's care is based on a mutual exchange of opinions between the nurses and the physicians.	1	2	3	4	5
In the event of a disagreement about the future direction of a patient's care, the nurses and the physicians hold discussions to resolve differences of opinion.	1	2	3	4	5
The nurses and the physicians exchange opinions to resolve problems related to patient cure/care.	1	2	3	4	5
When confronted by a difficult patient, the nurses and the physicians discuss how to handle the situation.	1	2	3	4	5
In the event a patient no longer trusts a staff member, the nurses and the physicians try to respond to the patient in a consistent manner to resolve the situation.	1	2	3	4	5
In the event a patient develops unexpected side effects or complications, the nurses and the physicians discuss countermeasures.	1	2	3	4	5
The nurses and the physicians discuss whether to continue a certain treatment when that treatment is not having the expected effect.	1	2	3	4	5
The nurses and the physicians together consider their proposals about the future direction of patient care.	1	2	3	4	5
When a patient is to be discharged from the hospital, the nurses and the physicians discuss where the patient will continue to be treated and the lifestyle regimen the patient needs to follow.	1	2	3	4	5
The nurses and the physicians discuss how to prevent medical care accidents.	1	2	3	4	5

About The Relationship between Nurse and Physician

	Always	Usually	Sometimes	Rarely	Never
The nurses and the physicians can freely exchange information or opinions about matters related to work.	1	2	3	4	5
The nurses and the physicians can easily talk about topics other than topic related to work.	1	2	3	4	5
The nurses and the physicians help each other.	1	2	3	4	5
The nurses and the physicians greet each other every day.	1	2	3	4	5
The nurses and the physicians show concern for each other when they are very tired.	1	2	3	4	5
The nurses and the physicians take into account each other's schedule when making plans to treat a patient together.	1	2	3	4	5

Organisational Influence in Nursing Scale

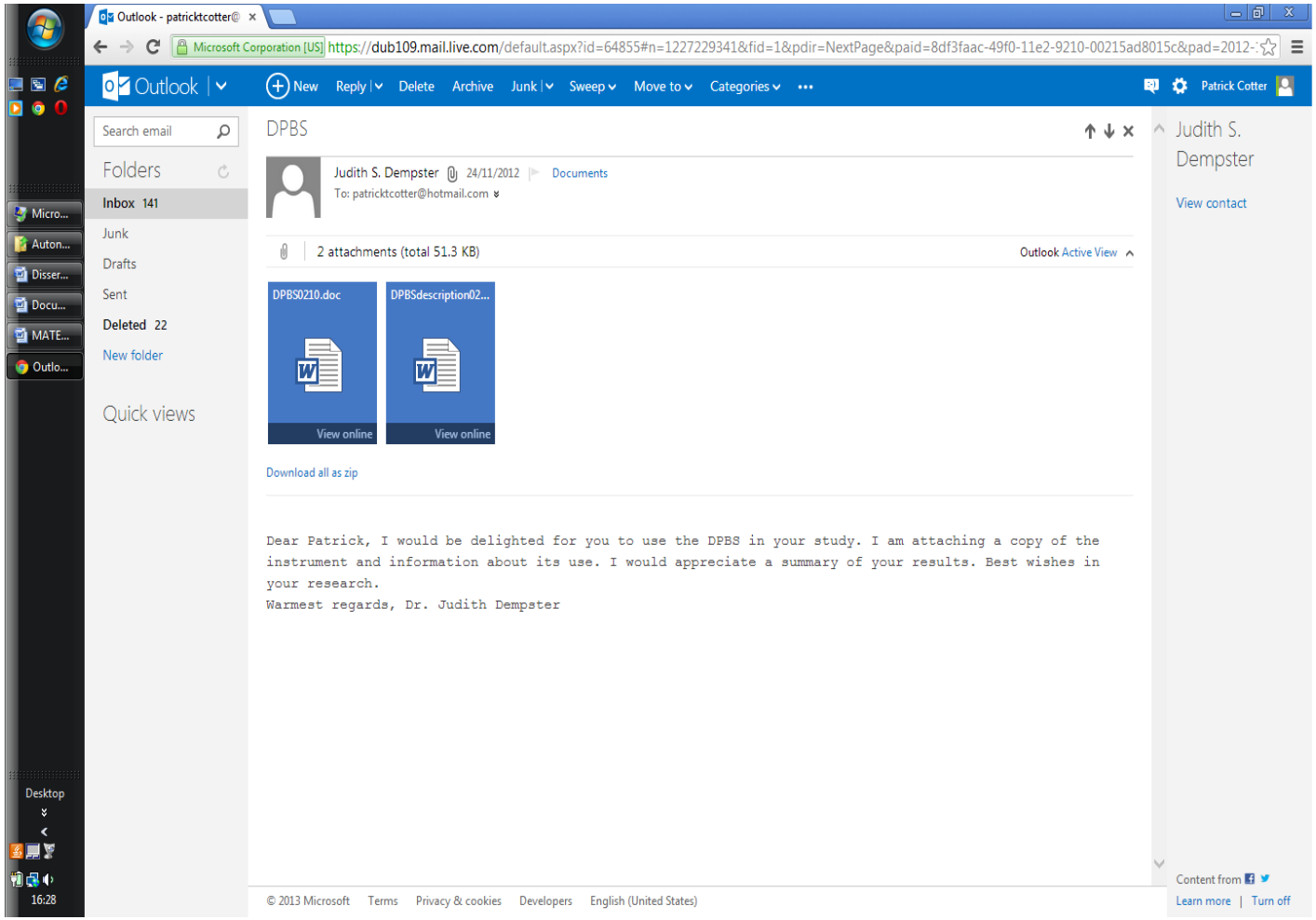
The purpose of this scale is to determine the extent to which your organisation influences your practice as a nurse.

To complete this scale please read each statement carefully and place an X in the box that indicates your level of agreement with each of the statements.

The organisation in which I work...	**Always**	**Usually**	**Sometimes**	**Rarely**	**Never**
....values my clinical nursing practice					
....gives me the authority to practice to my full capacity as a nurse					
....encourages me to communicate with all members of the healthcare team					
....exerts too much control over my clinical nursing practice					
....encourages me to contribute to decisions about patient care					
....encourages trusting and supportive relationships within the healthcare team					
....has too many policies, procedures and routines involved in patient care					
....recognises my knowledge and ability as a nurse					

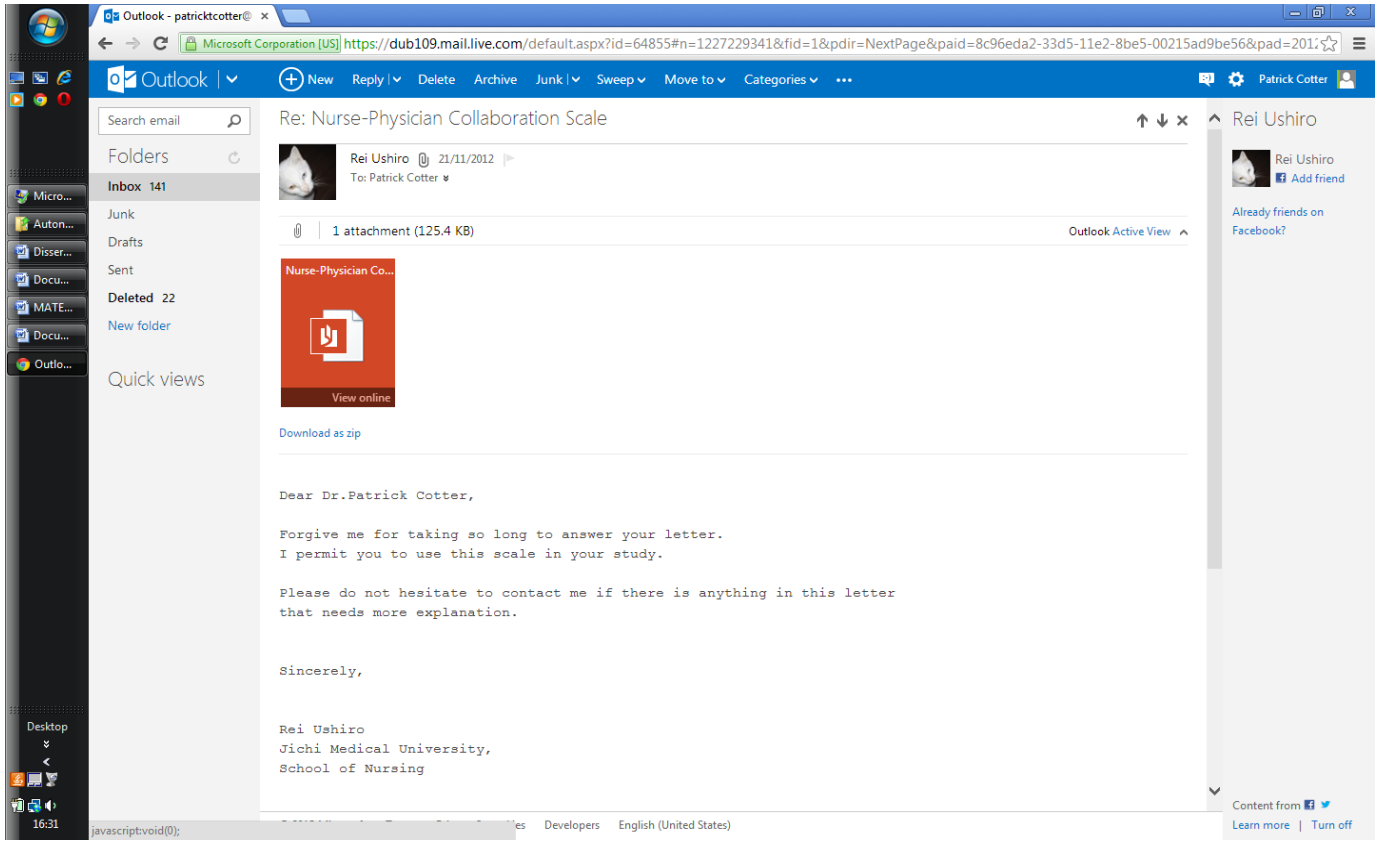
Appendix IV

Permission from Dr. J. Dempster


Outlook - patricktcotter@
Microsoft Corporation [US] https://dub109.mail.live.com/default.aspx?id=64855#n=1227229341&fid=1&pdir=NextPage&paid=8df3faac-49f0-11e2-9210-00215ad8015c&pad=2012-
Outlook
New
Reply
Delete
Archive
Junk
Sweep
Move to
Categories
Patrick Cotter
Search email
Folders
Inbox 141
Junk
Drafts
Sent
Deleted 22
New folder
Quick views
DPBS
Judith S. Dempster 24/11/2012 Documents
To: patricktcotter@hotmail.com
2 attachments (total 51.3 KB)
Outlook Active View
DPBS0210.doc
View online
DPBSdescription02...
View online
Download all as zip
Dear Patrick, I would be delighted for you to use the DPBS in your study. I am attaching a copy of the instrument and information about its use. I would appreciate a summary of your results. Best wishes in your research.
Warmest regards, Dr. Judith Dempster
Judith S. Dempster
View contact
Content from
Learn more | Turn off
© 2013 Microsoft Terms Privacy & cookies Developers English (United States)
Desktop
16:28

Appendix V

Permission from Dr. Ushiro


Outlook - patricktcotter@
Microsoft Corporation [US] https://dub109.mail.live.com/default.aspx?id=64855#n=1227229341&fid=1&pdir=NextPage&paid=8c96eda2-33d5-11e2-8be5-00215ad9be56&pad=201
Outlook
New
Reply
Delete
Archive
Junk
Sweep
Move to
Categories
Patrick Cotter
Search email
Folders
Inbox 141
Junk
Drafts
Sent
Deleted 22
New folder
Quick views
Re: Nurse-Physician Collaboration Scale
Rei Ushiro 21/11/2012
To: Patrick Cotter
1 attachment (125.4 KB)
Outlook Active View
Nurse-Physician Co...
View online
Download as zip
Dear Dr.Patrick Cotter,
Forgive me for taking so long to answer your letter.
I permit you to use this scale in your study.
Please do not hesitate to contact me if there is anything in this letter
that needs more explanation.
Sincerely,
Rei Ushiro
Jichi Medical University,
School of Nursing
Rei Ushiro
Rei Ushiro
Add friend
Already friends on Facebook?
Content from
Learn more | Turn off
Developers
English (United States)
javascript:void(0);
Desktop
16:31

Appendix VI

Organisational Influences on Nursing Scale

Reviewers' Instructions and Form

Research entitled: ***Clinical Autonomy, Nurse/Physician Collaboration and Organisational Influence in Emergency Nurses***

Thank you for agreeing to review this short questionnaire which will be used to collect data for my DN study. The instrument that I am asking you to review was developed to measure Organisational Influence in the Clinical Autonomy of Nurses.

The purpose of this expert review is to ensure that the final questionnaire is clear, concise and contains relevant items relating to Organisational Influence in the Clinical Autonomy of Nurses. Your expert opinion will enhance the quality of the questionnaire by highlighting unnecessary items that I will subsequently omit, while refining others.

I have enclosed a reviewer's copy of the instrument for you to evaluate. I have provided instructions on how to complete the review of the questions on the new instrument.

Thank you in advance for completing the review, it is very much appreciated.

Please do not hesitate to contact me if you need to clarify any points or require further information.

Kindest Regards,

Patrick Cotter MSc, PGDipN(A&E), BSc, Dip Mgt, RGN, RM, RNP
Doctor of Nursing Student, Catherine McAuley School of Nursing & Midwifery, University College Cork
Tel: 086 8314785
E-mail: patricktcotter@hotmail.com

Background information on the study

There is a recognition that nurses have a central role in healthcare delivery in an evolving and challenged healthcare environment (Hanley, 2003; Reconfiguration Forum for Cork and Kerry, 2009). Among the possible remedies to the challenges of delivering emergency care proposed is the enhancement of the clinical skills of emergency nurses. However, McCarthy, et al. (2013) have found that emergency nurses in Ireland have attained high levels of skill and perceived competence in the perfomance of procedures. Autonomy in performing these skills has not been investigated. The literature indicates that Nurse/Physician Collaboration and Organisational Issues may have a significant influence over the Clinical Autonomy of nurses.

Aim of the Study: To investigate the levels of Clinical Autonomy and Nurse/Physician collaboration among emergency nurses and if there is a relationship between these two concepts. This research study also aims to establish if there is a relationship between Clinical Autonomy and Nurse/Physician collaboration and demographic variables of age, experience and education as well as investigating if the organisation in which nurses work have any influence over the concepts

Instructions for Reviewers

There is a table with a list of statements regarding the organisation in which each participant nurse works. These statements have been generated from a review of the literature. The table is organised into 4 columns; A, B, C, D

Column A: List of items; presented in column A are items (statements) generated from a review of the literature. These items represent findings from one or a number of studies. Please read each statement carefully. **You are not required to fill in anything in Column A.**

Column B: Item clarity; please read each item in Column A and indicate whether the item is clear or unclear by placing a circle around your choice.

Column C: Content validity; please read each item again in Column A for each section and indicate whether the item is relevant to what is being measured (i.e. Organisational Influence in the Clinical Autonomy of Nurses) by placing a circle around your choice.

Column D: Apparent internal consistency: please review all the items in Column A and indicate whether the items collectively appear to measure the same thing by placing a circle around your choice.

Additional Comments: There is a section at the end of the reviewers form if you need to add additional comments based on your review of the items and whether you found items clear or unclear, relevant or consistent.**See below example of how to compete the review for one of the statements**

Participants are asked to rate their agreement with statements about the organisation in which they work i.e. *'The organisation in which I work....'*			
A Item	B Clarity	C Relevance	D Consistency
Rating: Always, usually, sometimes, rarely, never; ....values my nursing practice	Clear / Unclear	Not relevant / Somewhat relevant/ Quite relevant/ Very relevant	Please indicate whether the items overall appear to measure the same thing i.e. *organisational influence in the Clinical Autonomy of nurses* Yes / no

:

Appendix VII

Content Validity – Expert Responses

Organisational Influences on Nursing Scale

Organisational Influences in Nursing Scale **Expert Panel Rating – Content Validity Index**										
Item *The organisation in which I work....*	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Expert 8	No. Agree	Item CVI
...values my nursing practice	4	4	3	4	4	4	4	3	8	1.00
...gives me the opportunity to practice to my full capacity as a nurse	4	4	4	4	4	4	4	4	8	1.00
...encourages me to communicate with all the members of the healthcare team	4	4	4	4	3	4	4	4	8	1.00
...exerts too much control over my nursing practice	4	3	4	4	3	4	N/A	1	6 (of7)	0.86*
...encourages me to contribute to decisions about patient care	4	4	3	3	4	4	3	3	8	1.00
...encourages trusting and supportive relationships within the healthcare team	4	4	4	3	4	4	3	4	8	1.00
...has too many policies, procedures and routines involved in patient care	4	4	4	4	3	4	3	4	8	1.00
...recognises my knowledge and ability as a nurse	4	4	4	4	4	4	3	3	8	1.00
									Mean I-CVI	0.98
									S-CVI/ Ave	0.98
Apparent Internal Consistency for Scale	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8	100%

Appendix VIII

Ethical Approval from Cork Teaching Hospitals Research Ethics Committee

Tel: + 353-21-490 1901
Fax: + 353-21-490 1919

Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland

COISTE EITICE UM THAIGHDE CLINICIÚIL
Clinical Research Ethics Committee

Lancaster Hall,
6 Little Hanover Street,
Cork,
Ireland.

Our ref: ECM 4 (c) 12/03/13

8th February 2013

Professor Geraldine McCarthy
Emeritus Professor
Catherine McAuley School of Nursing & Midwifery
University College Cork
Brookfield Health Sciences Complex
College Road
Cork

Re: Clinical autonomy and nurse/physician collaboration among emergency nurses.

Dear Professor McCarthy

Expedited approval is granted to carry out the above study in:

- [redacted]

The following documents have been approved.

- Signed Application Form
- Study Protocol
- Information Leaflet
- Questionnaire.

We note that the co-investigators involved in this study will be:

- Patrick Cotter.

Yours sincerely

Dr Michael Hyland
Chairman
Clinical Research Ethics Committee
of the Cork Teaching Hospitals

The Clinical Research Ethics Committee of the Cork Teaching Hospitals, UCC, is a recognised Ethics Committee under Regulation 7 of the European Communities (Clinical Trials on Medicinal Products for Human Use) Regulations 2004, and is authorised by the Department of Health and Children to carry out the ethical review of clinical trials of investigational medicinal products. The Committee is fully compliant with the Regulations as they relate to Ethics Committees and the conditions and principles of Good Clinical Practice.

Appendix IX

Letter Seeking Access to Sample from Gatekeepers

XXXXXXXX
XXXXXXX,
Co. Cork
E-mail: patrick.cotter@hse.ie
Ph: 08XXXXXXX

Date: XX/03/2013

Re: Permission to Access Emergency Department Nursing Staff for the Purposes of Research Data Collection

Study Title: Clinical Autonomy, Nurse/Physician Collaboration and Organisational Influences in Emergency Nurses

Dear Director of Nursing,

I am currently undertaking a Doctor of Nursing programme at the Catherine McAuley School of Nursing & Midwifery at University College Cork and am seeking your assistance with the above titled research study.

My interest is in the effective contribution of emergency nurses to overall Emergency Department care for patients and in particular their levels of autonomy in clinical practice. I am also interested in the closely related concept of Nurse/Physician Collaboration as well as the issues that influence these concepts in practice.

I am therefore seeking permission to access nursing staff working in the Emergency Department at your hospital for the purposes of gathering data to fulfil the objectives of my research study. I have gained ethical approval from the Cork Research Ethics Committee and I have included a copy of this with this letter.

I will be collecting data by means of a questionnaire distributed to staff and would like to place a collection box for collection of completed questionnaires in the Emergency Department.

I do not envisage that this research will impact on service delivery in any way and hope that you are in a position to grant permission to conduct the study at the Emergency Department in your hospital. If you require further information or if there are any further local application procedures required to conduct this study please let me know.

I look forward to your reply.

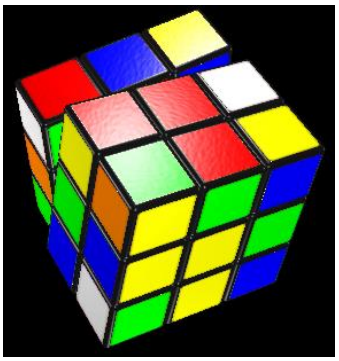
Kind regards,

Patrick Cotter
MSc, PGDipN(A&E), BSc, DipMgt, RGN, RM, RNP, RANP

Appendix X

Posters Used to Advertise Study

Calling All Staff Nurses



Please Help Me With My Research Study

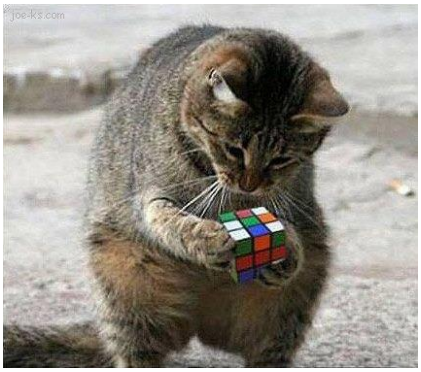
"Clinical Autonomy and Nurse/Physician Collaboration in Emergency Nurses"

Please Complete & Return The Questionnaire That I Have Left For You

Thanking You
Patrick Cotter (DN Student)

ED Staff Nurses

Please Help Me Work It Out!



Please Don't Forget To Complete a Questionnaire For My Study

"Clinical Autonomy and Nurse/Physician Collaboration in Emergency Nurses"

Thanks
Patrick Cotter (DN Student)

Appendix XI

Instructions for Participants

Clinical Autonomy and Nurse/Physician Collaboration Among Emergency Nurses

Participant Information

Please do not complete the attached questionnaire without first reading this information leaflet.

My name is Patrick Cotter and I am currently undertaking a Doctor of Nursing programme at the Catherine McAuley School of Nursing & Midwifery at University College Cork. I am seeking your assistance with the above titled research study.

About the Study

As the title of this study suggests I am interested in investigating the levels of Clinical Autonomy and Nurse/Physician Collaboration among emergency nurses in Ireland. Previous reasearch on these concepts suggest that they have a number of influences such as education, experience and organisational factors and I also wish to collect data on these variables.

In order to gather the information that I need to complete this study I have prepared the attached questionnaire containing four sections. Section 1 seeks some demographic information about you such as age, gender, qualifications and experience. Section 2 is a 30 item instrument that measures autonomy in clinical practice. Section 3 is a 27 item intrsument that measures practice behaviours indicative of Nurse/Physician Collaboration. Finally, section 4 is an 8 item instrument that measures organisational influences on your practice as a nurse.

Who can Participate in the Study?

Staff nurses employed by and working in emergency departments can participate.

Implications for Participants

I want to reassure all participants that the information supplied is done so with the confidence of total anonymity. There will be no personal identifier on the questionnaire. Numbers placed on the top of questionnaires are for coding purposes only and are not linked to any individual. Participation in this study is on a voluntary basis, and while no inducement is being offered to participate, there will be no personal implications for those who do not respond.

It is important for participants to be aware that I am not seeking written consent from partipants and that I consider completion of the questionnaire as implying informed consent.

How long will it take to complete the questionnaire?
Completion of the questionnaire should take no longer than 15 minutes.

How will I be able to access the results of this study?
A pdf version of the completed report will be sent to the Director of Nursing at each participant hospital to be made available to all who are interested in the findings. It is also anticipated that the results of this study will be published in the nursing literature.

What do I do now?
If, having read this information you are willing to participate in this study then I ask that you complete the attached questionnaire and return it to the collection box in your department.

If you require further information please don't hesitate in contacting me via phone or e-mail (details below).

Many thanks for the time that you have taken to read this leaflet and I hope that you find that you can help me with this study.

Researcher Contact Details

Patrick Cotter
patrick.cotter@hse.ie
08X XXXXXXX

Appendix XII

Questionnaire Codebook

Codebook for Study

Full Variable Name	SPSS Variable Name	Coding Instructions
Identification number	id	Subject identification number
Gender	Gender	1=male, 2=female
Age	Age	In years
Registration – Registered General Nurse	Q3_RGN	1=yes, 0=no
Registration – Registered Midwife	Q3_RM	1=yes, 0=no
Registration – Registered Psychiatric Nurse	Q3_RPN	1=yes, 0=no
Registration – Registered Nurse Intellectual Disability	Q3_RNID	1=yes, 0=no
Registration – Registered Nurse Prescriber	Q3_RNP	1=yes, 0=no
Registration – Registered Children's Nurse	Q3_RCN	1=yes, 0=no
Qualification – Certificate	Q4_Cert	1=yes, 0=no
Qualification – Diploma	Q4_Dip	1=yes, 0=no
Qualification – Bachelors Degree	Q4_Bachel	1=yes, 0=no
Qualification – Higher/Postgraduate Diploma	Q4_PGDip	1=yes, 0=no
Qualification – Masters Degree	Q4_Masters	1=yes, 0=no
Qualification – PhD/Doctoral Degree	Q4_Doctoral	1=yes, 0=no

Full Variable Name	SPSS Variable Name	Coding Instructions
Highest Qualification	Highest_qual	1=Certificate, 2=Diploma, 3=Bachelors Degree, 4=Higher/Postgraduate Diploma, 5=Masters Degree, 6=PhD/Doctoral Degree
Specific Emergency Nursing Qualification	Q5	1=yes, 0=no
Length of Nursing Experience	Q6_Years, Q6_Months	In years
Length of Emergency Nursing Experience	Q6_Years, Q6_Months	In years
Dempster Practice Behaviours Scale (DPBS)	Q8_1 to Q8_30	1=Not at all true, 2=Slightly true, 3=Moderately true, 4=Very true, 5=Extremely true
Nurse Physician Collaboration Scale (NPCS)	Q9_1 to Q9_9, and Q10_1 to Q10_12, and Q11_1 to Q11_6	1=Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never
NPCS Subscale – About sharing patient information	Q9_1 to Q9_9	1=Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never
NPCS Subscale – About decision-making process on the cure/care	Q10_1 to Q10_12	1=Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never
NPCS Subscale – About the relationship between nurse and physician	Q11_1 to Q11_6	1=Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never
Organisational Influence in Nursing Scale	Q12_1 to Q12_8	1=Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never